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AN APPRAISAL OF RECENT FRENCH WHEAT POLICY . . . .

. . . . By L. D. Mallory*

The historical policy of the French Government has been to attempt to assure fair returns to wheat producers. Because France has generally had to import wheat, this policy could usually be carried out through the use of import duties. As a result of wheat crops in excess of domestic requirements in each of the years 1932 to 1934, however, France was faced with a "wheat problem". Numerous laws were passed designed to control wheat supplies through import restrictions, production control, and removal of the accumulated surplus. The legislation culminated in the law of August 15, 1936, which established a National Wheat Board invested with broad powers, including price fixing. Import control measures were effective, as were, to some extent, those dealing with the storage and disposal of the surplus. Attempts to control production, however, were ineffective, and the entire program was costly when viewed from the standpoint of its actual accomplishments. The recent improvement in the wheat situation has been due more to 2 years of unfavorable weather than to a fundamental adjustment in the production and consumption of wheat in France.

The Wheat Problem

In spite of the steady drift of the French population from the land to the cities and the great industrial development that has taken place in France during the present century, agriculture remains that country's greatest industry. Its influence on the life of the people is very strong, and it may be said that France still possesses a predominantly rural character.

France is the world's fifth largest producer of wheat and among the European countries ranks second only to Russia. Wheat is grown throughout France and, from the economic as well as the social viewpoint,

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it is without doubt the most important crop. About 25 percent of all the land under cultivation is in wheat and approximately 50 percent of the total area in cereal crops.

Despite its importance as a wheat producer, France has normally been an importer of wheat. Production has risen steadily since the war, largely because of increased yields per acre. Acreage in the post-war period has not shown much change. Domestic consumption of wheat appears to have declined somewhat in recent years, as a result of dietary changes and the maintenance of high domestic prices relative to other foodstuffs. There was, of course, a conflict between the maintenance of satisfactory producer prices and the desire of the Government to furnish the consumer with cheap bread.

Until the depression, it was relatively easy to maintain domestic wheat prices through the use of import duties, as France was on a deficit basis. The rapid decline in world prices necessitated offsetting increases in import duties. Beginning in 1932, France experienced 3 years of exceptionally favorable growing conditions, and in each of these years wheat production exceeded domestic requirements. Import duties, therefore, were no longer fully effective, and resort was had to other measures to control the quantity of imports and to improve the prices received by domestic producers.

The temporary surplus of wheat in France created many difficulties, which the Government attempted to combat through numerous laws and decrees, some of which were effective. Others, however, appear to have been hastily adopted and ill considered.

It is believed that in exceptionally favorable years the present wheat acreage in France will provide more wheat than is necessary for domestic requirements. The problem facing the French Government, therefore, is how to distribute domestic supplies in surplus years so as to maintain prices received by producers. This problem is not difficult if years of high yields alternate with years when yields are average or below. Two or more successive years of high yields, such as occurred in 1932 to 1934, however, may create a situation that is very difficult and costly to handle. A discussion of trends in production, price, and disappearance of wheat appears pertinent as a background for the consideration of the vast amount of legislation that has been passed in France in recent years for the purpose of solving the "wheat problem."

Development of the surplus

In the production situation, the most important feature has been the upward trend in acre yields. While the sown area of wheat has declined since the 1890's, the crop outturn in recent years has equaled or exceeded

the high level of the period around 1900. This has been due to better unit yields. According to the official French estimates, sown area fell gradually during the period from 1892 to 1914 from more than 17,000,000 acres to a little less than 15,000,000. Production, however, remained high. Following the immediate post-war years, the amount of land devoted to wheat has been relatively constant within a range of 12,600,000 to 13,600,000 acres. The trend of yields, with the exception of the years of the war and immediately thereafter, has been upward, the highest being in 1933.

The following official estimates show the changes in area, yield, and production:

Table 1. Wheat acreage, yield, and production, average 1891-1900 to 1931-1935

Period	Acreage	Yield per acre	Production
	1,000 acres	Bushels	1,000 bushels
1891-1900.....	16,810	18.59	312,563
1901-1910.....	16,230	18.62	302,201
1911-1920.....	13,456	18.33	246,609
1921-1930.....	13,314	21.09	280,839
1931-1935.....	13,274	23.86	316,685

The last average shown is not as representative as the others, since it covers only 5 years, but it is in keeping with the trend. The year 1891 is as far back as a fair approximation of the annual crop figures can be obtained. Yields, however, have increased steadily since 1815.1/

This increase is due to several factors: better farm practices growing out of scientific discoveries; crop rotation of a more advanced order; the use of chemical fertilizers, particularly in the years following the World War; and, probably of most importance, the use of improved seed.

The introduction of foreign seed and the selection and hybridization of varieties have greatly increased unit yields, particularly in recent years. Somewhat parallel cases of yield trends are to be found in Italy and Spain.

Reduced seed requirements constituted another factor affecting the supplies available. Over a period of 40 years, plantings declined by some

1/ Michael, L. G., "Agricultural Survey of Europe: France", U.S.D.A. Technical Bulletin No. 37, February 1928, Washington, D. C.

3,000,000 acres and left available the seed for that much land. Moreover, better cultural practices, the use of seed drills, and the use of improved varieties reduced the amount of seed sown per acre. No accurate data are available on seed use in earlier times, but, according to some private estimates, the amount that had to be sown 40 years ago was at least 10,000,000 bushels more than present requirements.

While improved yields and decreased seed use permitted larger supplies of grain from smaller areas, the advance of milling technique resulted in more flour and bread for a given quantity of grain. During the period discussed, white bread was generally used. The change from small local mills to large central plants permitted greater efficiency, while the improvement of milling machinery raised the percentage of flour obtained. No information of a positive nature is available on extraction ratios in various periods, but in France 30 or 40 years ago it was probably between 60 and 65 percent. Though the figure of 70 or 72 percent is often used today in calculating consumptive needs, it is probably nearer 72 to 74 percent with a crop of average quality. This represents an increase of 15 percent in flour supplies from the same quantity of wheat. In earlier times, coarser bread was eaten in the country districts and the change in bread supplies would be less than that shown by the calculation; nevertheless, the factor is of some importance.

In addition to domestic production, France had available, and was under obligation to take, increasing supplies of cereals from overseas possessions. The north African territories of Morocco, Algeria, and Tunisia furnish mainly bread and durum wheats with some corn and barley.

For the 6 years 1930-31 to 1935-36, France imported from northern Africa a net average of 10,177,000 bushels of bread wheat and 9,543,000 bushels of durum wheat, including flour and semolina on a grain basis. The average total of 19,720,000 bushels naturally had an influence on the pressure of supplies.

Other cereals as well had a certain influence on wheat production, for their prices in relation to wheat prices were such as to favor the use of land for wheat rather than for other grains. Indo-Chinese rice was shipped to France in constantly increasing quantities and when used for hog and calf feed supplanted some barley, oats, or other feed grains.

As in most modern countries, there has been a change in consumptive habits, which is extremely difficult to evaluate for France. Earlier data are so scanty as to be of little use, and present-day figures can usually be shown to be incorrect. It may be assumed, however, that requirements in recent years have been about 325,000,000 bushels. This represents a

"normal" use rather than the high figures of a few recent years, when because of the Government program considerable grain was denatured for use as animal feedstuff.

Compared with a "normal" of about 325,000,000 bushels we have a figure of 345,000,000 for the last decade of the 1800's.2/ The decline is all the more significant when it is remembered that population has increased. For the decade of 1891-1900 the population was 38,600,000, while in 1930 it was 3,000,000 higher, or 41,600,000. The decrease in consumption from a long-time point of view is mainly due to smaller seed use, better mill efficiency, and lower per-capita consumption. The last is the result of changing dietary habits and has been observed in most countries. There has been a shift from grain to meat, fresh vegetables, fruit, and dairy products. This change has come from the rise in the standard of living, more modern ideas concerning health and diet, and better commodity transport facilities.

Rising supplies and decreasing needs culminated in the surplus previously referred to. The position of France in respect of this problem is well shown in table 2.

Table 2. Apparent annual wheat supplies, 1927-28 to 1935-36

Crop year August to July	Production a/	Net imports b/	Allowance for the Saar c/	Net apparent supplies
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
1927-28.....	276,126	49,603	2,572	323,157
1928-29.....	281,283	67,124	2,572	345,835
1929-30.....	337,250	6,149	2,388	341,011
1930-31.....	228,104	58,902	2,388	284,618
1931-32.....	264,116	75,401	2,021	337,496
1932-33.....	363,750	29,001	2,021	390,730
1933-34.....	362,328	15,677	2,021	375,984
1934-35.....	338,511	- 19,159	900	318,452
1935-36.....	284,949	9,832	-	294,781

a/ Production is for first year mentioned; for 1927-28, for example, the harvest is that of 1927 and the consuming year 1927-28. Production estimates of the French Ministry of Agriculture except for the 1932 harvest, which is considered to have been 363,750,000 bushels rather than the Government figure of 333,522,000. b/ Net imports, considering all imports and exports of bread wheat, durum wheat, flour, and semolina on a grain basis. Flour converted to terms of wheat at 1.333 and semolina at 1.5369. c/ Shipments to the Saar, after Georges Garwy, "La Consommation des Cereales en France", a memoir presented to the Statistical Institute of the University of Paris, 1935 MS.

2/ Rapport Bernier, "Journal Officiel" 1924, Documents Parlementaires, Chambre des Deputes, p. 614.

The disappearance during the years shown is determinable if stocks at the beginning and end of the period are known. Wheat utilization, however, was unusually large because of the quantity denatured and thus rendered unfit for human consumption. To find what a "normal" disappearance was, to be used in a subsequent calculation of surplus, the amount of grain denatured should properly be deducted. This has been done in table 3. From the data shown and by employing a considerable amount of collateral and qualitative information, together with checks against the position of stocks, annual disappearance has been calculated. The estimates are as follows:

Table 3. Apparent normal supplies, estimated normal disappearance, and year-end stocks of wheat, 1928-29 to 1935-36

Crop year August to July	Apparent supply for "normal" use a/	Estimated normal disappearance b/	Difference c/	Cumulative difference d/
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
1928-29..	345,835	323,340	22,495	22,495
1929-30..	341,011	323,340	17,671	40,166
1930-31..	284,618	323,340	- 38,722	1,444
1931-32..	337,496	323,340	14,156	15,600
1932-33..	390,730	323,340	67,390	82,990
1933-34..	361,655	327,000	34,655	117,645
1934-35..	301,219	327,000	- 25,781	91,864
1935-36..	288,351	327,000	- 38,649	53,215

a/ This column is the same as the fourth column of table 2, with the following amounts of denatured wheat deducted: 1933-34, 14,329,000 bushels; 1934-35, 17,233,000 bushels (denaturing was 20,907,000 bushels but 3,674,000 were exported); and 1935-36, 6,430,000 bushels. b/ The computations and considerations employed to arrive at these estimates are rather lengthy, and the figures alone are given. It is believed that consumption of wheat in the form of breadstuffs has actually been declining, as the French claim; but during the years included, and more particularly in the last few years, disappearance has increased because of more extensive feed use and waste. c/ Apparent supply less estimated disappearance. d/ This corresponds approximately to year-end stocks, not including denatured grain.

The surplus, so far as French agricultural economy was concerned, was not merely the amount left over after each year's use, but rather the excess over usual or "normal" utilization. Heavy disappearance during several years was both a result and a manifestation of the existing surplus condition and the operation of the control program. For an exporting country, such a condition would have been of small moment; but, in one normally an importer and on a high price level, it was serious. The amount of the surplus is not shown by any of the foregoing data, since subsidized

exports, or part of the excess, have been deducted from the foreign trade figures. When such exports are added to the supplies shown in table 2 (production plus net imports), the following results are obtained:

Table 4. Total wheat supplies and surplus, 1928-29 to 1935-36

Crop year August to July	Net apparent supplies	Subsidized exports a/	Net apparent supplies plus subsidized exports	Estimated normal disappearance	Cumulative surplus
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
1928-29..	345,835	0	345,835	323,340	22,495
1929-30..	341,011	b/ 0	341,011	323,340	40,166
1930-31..	284,618	b/ 0	284,618	323,340	1,444
1931-32..	337,496	0	337,496	323,340	15,600
1932-33..	390,730	0	390,730	323,340	82,990
1933-34..	375,984	3,090	379,074	327,000	135,064
1934-35..	318,452	37,478	355,930	327,000	163,994
1935-36..	294,781	13,081	307,862	327,000	144,856

a/ Calendar year figures obtained from official sources and adjusted to crop years from foreign trade statistics. The subsidized exports correspond to total exports of bread wheat except those of seed wheat, which are small. b/ There was a special export operation in this year, which is not included because of its character. It will be dealt with later in the text.

The quantity of 164,000,000 bushels of surplus reached in 1934-35 was an important factor in French economy. It is true, of course, that such an amount did not exist at any one moment, for it grew over a period of time and the Government program was removing grain during several seasons. Nevertheless, the large surplus indicates the extent of the problem, and over a period of years it was the principal factor. Up to the time that foreign supplies were excluded, however, the world market and supply situation also played a significant role, and to a large degree the influence of exterior prices nurtured the idea of control and played a decisive part in its institution.

Effect of world prices

World supplies of grain rose rather rapidly and consistently for several years beginning with 1924-25. World prices, as measured by British parcels in gold cents, declined steadily from that year to 1934-35. The increased competition was mitigated in part by increases in the French tariff. Duties were moderate up to the time of the World War. During the emergency period they were generally removed. Following the conflict and

the immediate reconstruction period, grain production in France approached its pre-war level and demand for protection again asserted itself. This, together with the fall of the franc, caused several increases in tariff rates. In January 1924 the import duty was 7 francs per quintal, rising in August to 14 francs; in August 1926 to 18.20 francs; in September 1927, to 25 francs; in November to 35 francs; in May 1929, to 50 francs; and in May 1930, to 80 francs (85 cents per bushel), where it has remained. The protection afforded had some influence over a period of years in stimulating domestic production and contributed to the problem from that standpoint. Yet even when the duty was added to foreign grain, prices were still highly competitive in certain seasons. The French farmer was not disturbed by this for several years, as the franc was undergoing devaluation and ever higher prices were being paid him in domestic currency. This held true until about 1927-28. But when the interior price level had become stable, the increasing quantities of home-grown grain made competition from abroad felt more intensely.

The following table shows average prices for French and foreign grain with the customs duty:

Table 5. Price per bushel of British parcels and domestic French wheat, 1925-26 to 1932-33

Year	French tariff on wheat	Price of British parcels at Liverpool	British parcels plus French tariff	Price of domestic French wheat
	Cents	Cents	Cents	Cents
1925-26.	14	170	184	154
1926-27.	18	164	182	188
1927-28.	34	152	186	174
1928-29.	40	129	169	167
1929-30.	59	127	186	147
1930-31.	85	76	161	184
1931-32.	86	59	145	173
1932-33.	a/ 85	52	137	115

Conversions made at the prevailing rates of exchange.
a/ Old gold rate of American dollar employed (1 franc = 3.92 cents).

Further additions to the already high duty (85 gold cents per bushel) would have been somewhat absurd, and it was not certain that they would be entirely effective. Other and more effective means were sought: first, mixing percentages to regulate the miller's business; second, import licensing to control the mixing percentage. These proved flexible and effective weapons; and, from regulating foreign supplies the next step, that of controlling the domestic surplus, followed naturally.

Briefly, the problem rooted far back in a number of trends that tended to bring production and requirements more closely together. World

prices began pressing on the domestic prices. Then a series of large harvests created a domestic surplus, which uncontrolled would have driven prices to a low level and, over a period of time, would have tended to correct the situation. The prevailing thought within France, however, was to foster wheat production and protect the producer against price declines. To do this, Parliament enacted a series of laws to deal with the "wheat problem", which taken together constituted an extended and expensive valorization scheme.

Methods of Solving the "Wheat Problem"

Complexity of the legislative program

The centralized form of government in France assures the enactment of laws on a nation-wide basis. After the World War and until the spring of 1936, the dominant political influence was exerted by the central parties of the Radicals and Radical Socialists. Official policy was essentially democratic and avoided placing the Government in business, though there was little hesitation to utilize the Government's influence in controlling business when this seemed desirable. The efforts of the Government during these years were directed toward increasing wheat production and at the same time protecting the prices received by domestic producers. It was also considered desirable to keep breadstuffs as reasonably priced as possible because wheat formed so important a part of the diet.

In 1936, a decided shift in political power to the left brought about the passage of the law of August 1936. This law established a national wheat board and represented an attempt to consider the wheat problem in the light of its national importance in the economy of France, with particular emphasis on the status of the small producer.

The development of the wheat problem in France was so rapid and unexpected, arising as it did from several years of unusually favorable yields, that the legislation designed to solve it was of a complex nature and often conflicting. Coming as it did during a period of depression in all lines of activity, the wheat problem required immediate attention. Time did not permit the study and mature consideration that might otherwise have been given to the question.

As a result, the legislative program was extremely complex and there were many overlapping laws and decrees. From 1929 to 1936, 10 laws were passed, on the basis of which hundreds of decrees were issued. In general, however, the legislation was designed to maintain prices to domestic producers, first through the control of imports, later through the removal of the accumulated surplus, and finally through the control of domestic production.

Control of imports

It was natural that the first move to support the French market was to keep out foreign supplies. Initially there was the tariff, followed by other and more positive methods of excluding imports.

The tariff: So long as there was a deficit of wheat in France, the increasing world exportable surplus and declining world prices were helpful in provisioning France at less expense. The continued price decline abroad, coinciding with the rise in domestic production, was troublesome, but continued additions to the rate of duty kept the world price, plus duty, on the average above the interior market price. For a time, also, the inflation of the French currency resulted in rising domestic prices; but, when monetary stabilization and a new price level became actualities, the forces in play were brought home to the French farmer. The rate of duty was increased to the equivalent of 85 United States gold cents per bushel in 1930, at which point it remained, but from 1929-30 to 1930-31, world prices, as measured by quotations on British parcels, fell so far that another sharp duty increase would have been necessary to impede imports if other restrictive measures had not been used. The successive upward changes in duty maintained the price of foreign wheat above the domestic market price from 1924-25 to 1930-31. In 1930, however, the rapid fall in world prices changed this relationship in spite of the high customs tariff imposed. The tariff no longer being fully effective (see table 5), other means were employed, such as the tightening of provisions concerning the milling-in-bond trade and the use of quantitative restrictions.

Milling in bond: Importation for milling in bond was a general practice in the grain and milling trade of France. Since the existence of the wheat problem, agrarian groups have constantly charged that imports under temporary admission were a means of introducing wheat products into France, illegally or otherwise. An extensive inquiry by a parliamentary commission, however, failed to support this contention.3/

Formerly, two sources of action were open, under temporary admission, to introduce wheat products into France. Millers were permitted, if they so chose, not to re-export the products, but to forfeit their bond as payment of customs duties. They could thus sell at home or abroad, whichever proved more profitable. This was quite a legitimate practice as long as wheat imports were permitted. It was, however, removed by the law of December 1, 1929. The second means of introducing supplies was through the exportation of wheat products in an amount

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3/ "Rapport de la Commission chargée de rechercher les quantités totales de blés étrangers entrées en France depuis le 1er Mai 1933 et les conditions d'introduction". Journal Officiel, July 2, 1935.

calculated to offset imports. This was to provide millers with the desired quantity of high-protein, imported wheat. It is undoubtedly true that millers were able to extract much more than they exported, leaving a portion in France that in reality represented imports on which no duty had been paid. The successive reforms of the temporary admission regime and the fixing of type samples of products for re-export by November 1930 had effectively closed this means of entry.

Milling in bond continued in the usual manner up to August 1936 with the establishment of the National Wheat Board, which was vested with the powers of an import and export monomply. Provisions for a restricted type of milling in bond were issued in a decree of October 29, 1936. The gist of the present system is that, after exports of wheat, flour, or farinaceous products have been made, a specified amount of wheat may be imported in compensation. The usual customs duty must be paid on this wheat and upon proof of use a portion or all of the duty is returned. Business under this system has so far been restricted.

Milling percentages: After tightening up the milling-in-bond system and finding that the tariff, even though preventive in nature, did not exclude foreign grain, mixing regulations and import licensing were resorted to. The mixing regulations were instituted by decree in July 1930. Licensing of imports as a means of enforcing compliance with a quota or mixing percentage is frequently used, but in France this was not put into effect until November 1931.

The mixing percentage requires a miller grinding foreign wheat to incorporate in his monthly total a stipulated percentage of domestic wheat. The purpose of this is, of course, readily apparent. It is designed not only to reduce imports of grain that may get over the tariff wall, but also to insure the utilization of home-grown grain even though other grain may be preferred for its quality. By adjusting the percentage from time to time in accordance with production and use, the movement of domestic grains into consumption can be regulated and this price level controlled to a certain degree. The first rate, 3 percent foreign grain, was established on December 3, 1929.

While the idea was excellent for the ends proposed, it did not work out efficiently. Charges of fraud were made in connection with the use of foreign wheat, and during a great part of 1930-31, when 10 percent foreign wheat was permitted, many millers were said to have used as much as 20 percent. Numerous condemnations and the activities of a large corps of control agents were apparently not enough to stop fraudulent practices. With a large number of widely scattered mills, it was difficult to check the use of a given percentage after the wheat had been admitted into the country.

Import licenses: To insure proper usage of both foreign and domestic wheat, recourse was had to the licensing of imports, by which wheat could not be brought in except when accompanied by an import license issued by the Ministry of Agriculture. Licenses were issued only to persons who proved they were legally established grain merchants or millers. Even imported grain for shipment to the Saar and seed wheat from abroad had to be accompanied by permits. A special office was set up to control the import licenses.

One further restriction on wheat imports may be noted - the quota on Morocco. Absolute quotas are at present the bulwark of agricultural protection in France. The wheat quota applied to Morocco since 1932 is more properly a tariff quota, for a stated quantity is admitted free of duty as colonial grain. The quota prevailing for recent years has been 6,063,000 bushels of bread wheat, 551,000 bushels of durum, and 6,600 short tons of semolina. This has not proved particularly restrictive except in individual seasons, for over a period of years it represents the bulk of the exporting capacity of the protectorate.

Import control effective: The effectiveness of these measures in restricting imports depends on only a few factors. The extent of restriction by a tariff depends upon the relationship between domestic and world prices. When a tariff is for protection rather than for revenue purposes, it may inhibit or exclude foreign products, depending upon the rate imposed. Even during the time that annual average world prices plus the duty were above French market prices, imports were still made. They were due to some extent to seasonal price differences not apparent in the annual figures and in a larger measure to differences in quality. When world prices plus duty fell below domestic prices, imports were readily made.

Mixing regulations, assuming effective administration and enforcement, could confine the use of foreign wheat to the desired quantity or exclude it entirely. As mentioned above, fraud arose and could be controlled only with difficulty. This measure by itself could, under the conditions existing in France, be only partially effective. Licensing of imports by itself is an adequate means of limiting imports. Actually, however, it was used to enforce the mixing regulations. This was more desirable from the standpoint of French agriculture, since obligatory mixing provided the means of assuring a progressive use of home production.

It must be said that first the tariff and later the mixing regulations, supplemented by import permits, accomplished their purpose. With the exception of imports made because of the mistaken forecast of the 1929 harvest and the late crop of 1932, the import restrictions applied to foreign wheat were successful.

The development in the use of mixing regulations is shown in the following percentages:

Table 6. Partial list of mixing percentages, December 5, 1929, to date

Bread-wheat flour production	Minimum domestic required	Maximum foreign permitted
	Percent	Percent
December 5, 1929, to July 26, 1930 ..	97	3
July 27, 1930, to April 14, 1931	90	10
April 15 to 17, 1931	85	15
April 18 to 27, 1931	80	20
April 28 to June 16, 1931	75	25
June 17 to 30, 1931	70	30
July 1 to 3, 1931	75	25
July 4 to 9, 1931	80	20
July 10 to 24, 1931	85	15
July 25 to November 24, 1931	90	10
November 25, 1931, to January 30, 1932	97	3
January 31 to August 3, 1932	50 - 90	10 - 50
August 4 to December 1, 1932	97	3
December 2, 1932, to April 15, 1933 .	99	1
April 16, 1933, to date	100	0

Removal of the Surplus

The problem of restricting wheat supplies in France was partly solved by restricting imports; but, when grain was actually within the country and weighing on the market, some other means was necessary for the support of prices. In a country where production rarely equals domestic requirements, the control of imports can be effective. Surplus producing and exporting countries can do something by controlling production, but in countries like France, where a favorable year or series of good years may result in an occasional surplus, other measures are necessary. When a surplus occurs, the import restrictions become less effective and prices tend to be determined by supplies within the country. At the same time, such countries are unable to unburden themselves by exporting unless subsidies are resorted to. Perhaps one of the most significant characteristics of such a situation is the possible violent change in domestic prices as supplies are relatively short or abundant in relation to annual domestic needs. France has been in this position in recent years. Until 1932, wheat prices were supported by import restrictions. After that time, a series of three good harvests, together with colonial imports, resulted in an excess, which threatened to lower prices.

Provided prices are subject to market factors, the full effect of the surplus on prices can be alleviated only through its removal.

This may be accomplished temporarily by a storage plan, until subsequent harvests are smaller and require the use of the carry-over, or by an actual physical removal of the excess. For the purpose of discussion, the storage program, which was only temporarily an actual supply-reducing measure, has been included under price-supporting measures. The supply-reducing measures were a lowered bolting rate for flour, denaturing, and exporting.

For two of these operations, fairly definite data are available, but on the lowered bolting rate for flour little exists. In the figures shown in tables 2, 3, and 4, the extent of subsidized denaturing and exportation has been taken into account. When these quantities were subtracted from total supplies, there was left an amount for "normal" disappearance, since actual disappearance was higher because of the use of denatured wheat as feed grain. In the "normal" disappearance figures, any utilization over the customary ones would be because of reduced bolting.

Total surplus disposition, as closely as may be approximated at present, was as follows:

Denatured 4/	37,992,000	bushels
Exported by subsidy	53,649,000	"
Reduced extraction	8,000,000	"

Of the approximately 100,000,000 bushels removed physically from the market, reduced extraction of flour accounted for only a small part, but the idea is of some interest.

Flour extraction lowered: Lowering the extraction percentage for flour requires the use of more grain for a given quantity of flour or bread. For example, lowering the percentage from 72 to 66 requires 9.1 percent more grain. This reduction was merely reversing the idea of earlier years when extraction rates were raised in order to make grain go further. The law of July 15, 1922, provided a minimum bolting percentage, which was instituted by decree in 1927. Authority to move in the other direction was provided in a law of December 1927 and instituted by decree in 1932. The rates fixed from time to time were as follows:

Decree of:

November 20, 1927	- Minimum extraction rate fixed at 1 kilo less than the specific weight.
December 5, 1928	- Previous decree suspended.
September 27, 1932	- Maximum extraction rate limited to 66 percent.
December 11, 1932	- Preceding decree suspended.

4/ Actually there were 41,666,000 bushels denatured but 3,674,000 were exported.

September 6, 1934 - Maximum extraction rate fixed at 11 kilos below specific weight of the grain milled.
January 16, 1934 - Maximum percentage fixed at 12 kilos below specific weight but could not surpass 65 percent.

Law of:
December 24, 1934 - Previous provisions abrogated.
August 15, 1936 - If necessary, the Central Council will fix the rate of extration for flour.

Various authorities disagree on the question of extraction.5/ It would appear that average extraction in France at the present time is from 72 to 74 percent for the larger mills. For country districts where exchange and custom milling is the usual practice, a rate of 70 percent is used in calculations. This percentage may be a little under the actual extraction, the miller retaining any extra amount as part of his fee.

Over the 10-year period 1926 to 1935, the average specific weight of grain harvested in France was 75.36 kilos per hectoliter. Taking this, less an allowance of 2 percent for impurities, one arrives at 73.36 as the extraction rate if the extraction is accepted as equivalent to the specific weight. The figure of 66 percent fixed by the decree of September 1932 would cause a decrease of 7.3 kilos compared with the average bolting and require 11 percent more grain for a given amount of flour. The decrees of 1933 and 1934 were more drastic.

The plan in principle is an easy means of utilizing more wheat, and the only point to be examined is whether or not it will work and have the desired effect on the price level. Since it must increase the cost of flour, unless wheat prices are to be lowered to the extent necessary, millers and purchasers of flour must be compelled to accept a regime inimical to their own interests. A problem of enforcement is thereby created, making necessary a control or check on each of the thousands of mills within the country.

The first decree was short as to text and stated merely that the maximum extraction was fixed at 66 percent. Adequate control was not possible under this decree, and the system was dropped after 2-1/2 months.

5/ "Economic Nationalism in Europe as applied to Wheat", Wheat Studies, Food Research Institute, Stanford, vol. 8, no. 4; J. H. Shollenberger, "Bread Production and Trade in France", Foreign Crops and Markets, vol. 31, no. 6, August 5, 1935; "Le Ble et le Pain en France; Qualite ou Quantite?" Ste. d'Etudes et d'Informations Economiques, Paris, suppl. to Bull. Quotidien no. 282, December 12, 1934.

The next attempt was made by the decree of September 6, 1933, after the surplus in France was generally known and steps demanded for its removal. This time the previous mistake of a flat rate was avoided by placing the percentage as a function of specific weight.

To avoid non-observance as far as possible, the procedure was carefully outlined. Baking flour could not be delivered to a bakery except in sealed sacks bearing certain labels giving extraction rates, a record of operations had to be kept, and so on. Low-grade flours constituting a surplus over the maximum rate had to be denatured. It was provided that exceptions could be made for millers doing custom milling exclusively or grinding only the grain of bakers who exchange bread for wheat. In such cases, the amount of wheat was to be delivered directly by the producer to the miller or baker and was not to be in excess of that required for family consumption. These exceptions were granted through the departmental prefects.

Probably the first period of lower extraction rates did not have much effect. For the second no data are available, but if it had operated fully, approximately 16,000,000 bushels extra would have been removed. Monthly grindings are a disputed point but are probably in the neighborhood of 22,000,000 bushels, of which a portion is exchange or custom milling in rural districts, leaving approximately 14,700,000 bushels on which reduced extraction could operate. In the 17 months of the second period of the regime, an increased quantity of 10.8 percent would have resulted in the extra use of nearly 27,000,000 bushels. Just how much it did remove, no one knows; but it was certainly only a minor fraction. A figure of 8,000,000, as shown above, is adopted herein.

The fact that the extraction rate of only the larger millers could be readily controlled introduced an element of discrimination in the milling industry, since those who were observant of Government regulations met impossible competition from those who were not. It now appears that a considerable shift in milling took place from the large central mills to the smaller country mills and that late in 1934 flour from outlying points was sold in Paris at rates that Parisian millers could hardly meet. The Government, observing the lack of effectiveness of the measure, as well as the considerable inequities and trouble created, abolished the system by the law of December 24, 1934.

Denaturing an important feature: Denaturing wheat was an important part of the valorization plan. To reduce millable supplies and remove them from channels of human consumption, grain was treated or processed to render it fit only for livestock feed. The price of wheat for milling was well above the price that could be paid for its use as a feedstuff, and premiums consequently had to be paid in order to compensate holders for the price difference and induce them to denature their grain.

Authority for denaturing was contained in three laws. Many decrees were issued from time to time establishing the conditions and control of denaturing or changing the amount of the premium. In theory, the premium rates were not to exceed the difference between the official price of wheat and that of secondary cereals. Most of the denaturing was done on the basis of a premium of from 40 to 50 francs per quintal (50 to 63 cents per bushel; 1 franc = 4.65 cents).

On a crop-year basis, the amount denatured, as closely as can be determined, was 41,666,000 bushels, as follows:

1933-34	14,329,000	bushels
1934-35	20,907,000	"
1935-36	6,430,000	"

In handling this quantity, a good deal of valuable experience was gained by the authorities. By the end of 1934-35, sound methods and controls had been found. Several formulae were used: mixing with molasses, staining a percentage of the kernels with eosine red or methylene blue, and staining the mass of the grain with methylene blue. The molasses plan was abandoned early and chemical stains used. Eosine was found to lead to fraud, as it did not stain intensively enough and some mills were equipped with washing and conditioning apparatus which could remove the dye.

For both eosine red and methylene blue the earlier systems required only a percentage of kernels, usually 5 percent, to be stained. A given weight was stained separately and then mixed with the mass of grain to be sold as denatured. Here again, however, methods of evasion were found. Finally the Government required that only medicinally pure methylene blue of a certain staining power be used and that the whole mass of grain be sprayed with the dye, as successive mixing and spraying enables a thorough coloration. Purity of the dye was necessary since impure chemicals could be removed by washing. While there was some fraud, it could not have been more than a minor percentage, which steadily decreased as better methods of denaturing were evolved.

The system had the merit of actually removing the grain from milling channels and relieving the market. It was well controlled and supervised under the system finally developed. Its disadvantages were its cost and competition with secondary cereals. No data of a final character have been issued on the cost of the wheat program, but such as are available indicate denaturing costs in excess of 500,000,000 francs, or unit costs of about 45 francs per quintal, equivalent to 57 cents per bushel (1 franc = 4.65 cents). During most of the period, French wheat was worth about 30 francs per quintal in the export market, or 38 cents per bushel. The second principal disadvantage - competition with secondary cereals - is a serious one. France produces significant quantities of oats and barley

and small amounts of rye, corn, and buckwheat, of which imports are also made, but with the exception of Indo-Chinese rice the domestic producer is protected by tariff and quota.

It is true that wheat produced and denatured tended in a small measure to keep down the amount of land available for secondary cereals, but the placing of a large amount of denatured wheat on the market provided strong competition for other grains

All the denaturing carried out was by authority of the laws passed up to December 24, 1934. As mentioned earlier, new means were provided for in the decree laws of October 1935. These were superseded by the law of August 15, 1936, which set up the National Wheat Board. During 1936-37 there has been no surplus problem, and any action to be taken under the new regulations is dependent on future developments. The exact manner in which it will be handled is not yet determined but the principle is outlined in the law as follows:

> "In case of an excessive crop, the Central Council will determine the quantity of surplus wheat to be exported or stored and the dates on which these operations will begin, these surpluses being turned over to the cooperatives and then through their intermediary to the Wheat Office at a differential price, which will be fixed by the Central Council of the Office."

and further:

> "Beginning from the crop year 1938 a production quota corresponding to his normal rotation of crops will be placed on each producer selling more than 50 quintals and the surplus will be provided, according to a sliding scale established by the Central Council of the Wheat Office, by those producers who have exceeded the established quota. However, in the case of a tenancy system this quota would not affect in any way the rotation of crops of the tenant whose landlord has sold more than 50 quintals.
>
> "In the course of the crop year and according to the latest indications it received as to the yield of the last crop or the prospects of the next one, the Wheat Office may decide on an increase or a diminution of the quantities to be exported, stored, or imported."

These measures are ready for use in denaturing if a surplus of wheat in France again becomes a problem.

Subsidization of exports costly: The third surplus-reducing measure was exportation. With the price level existing during the period of

activity, this could be accomplished only by granting generous subsides or premiums. Even more extensive use was made of exportation than of denaturing, and from July 10, 1935, to the end of 1935-36, 53,649,000 bushels were disposed of in this way.

Such exports were authorized in the law of July 10, 1933. Financial resources were also provided and later supplemented in the law of December 1934. Of not quite the same character, but of importance, were the exports made under authority of the law of December 1, 1929. This latter provided for a reimburrement of bond or custom duty for exports of wheat imported during the year 1929. Just what quantities were exported under these provisions is difficult to determine. They appear to have been about 14,680,000 bushels in 1929-30 and 1,600,000 bushels in 1930-31. This movement in 1929-30 and 1930-31 may be defended by the argument that excess imports were permitted in 1929 before the crop could be determined and that reimbursement of duties upon exportation merely permitted a restoration of a sound supply situation without cost to the nation. This is somewhat different from the practice after 1933, which was dumping.

As previously mentioned, subsidized exports amounted to 53,649,000 bushels. They were limited to this quantity by the availability of funds and the obligations undertaken under the International Wheat Agreement. From the end of 1929 to date, supplies within France have been reduced, through one form or another of subsidized exports, by some 70,000,000 bushels, a not inconsiderable amount. The measure was valid within the limits of funds provided and did not create immediate domestic supply problems, as did denaturing.

Control was easily carried out, the customs officials certifying the shipment and the authorization being subsequently paid. The second phase of exporting, after July 1933, was made possible by attractive premiums. The reimbursement in 1929 and 1930 would not have succeeded as well as it did had not the mixing regulations squeezed holders of foreign wheat and allowed them little opportunity to use it within France.

The main disadvantage was the cost. The high domestic prices required the payment of high premiums to induce exportation. The decree of September 22, 1933, establishing the first premium, set a rate of 80 francs per quintal. This was modified on a number of later occasions, the rate generally being 65 to 70 francs. The average cost has been calculated at slightly over 75 francs per quintal, or 95 cents per bushel. Such a subsidy, when the same wheat brought only 28 to 30 francs (about 38 cents per bushel) on the export market, was obviously expensive.

There were no repercussions from other countries in regard to the French subsidy on exports. France was operating within the framework of the International Wheat Agreement and with the consent of the other nations.

As far as France was concerned, the export feature of the valorization program was successful - at a price. For the future, France may again enter the ranks of exporters by acquiring farmers' grain at less than the domestic price for purposes of export, as outlined by the text of law quoted above, but there is no guaranty that some form of subsidy may not be involved in export sales.

Control of Domestic Production

Apart from regulating foreign trade, the principal means of restricting supplies is by controlling or limiting the amount produced each year within the country. It has not yet been shown that a permanent control over production is desirable in France. Normally an importing nation, a few years of large crops enabled France to supply domestic requirements. This resulted, however, from very favorable weather conditions. The small crops of 1935 and 1936 have again placed the country on the verge of an import position.

In the main, production can be regulated only by control over the planted area. Under present conditions in France, given "normal" weather, it is probable that necessary requirements could not be consistently obtained on the area recently planted. A series of two or three good or bad years could result in heavy surpluses or deficits in supply.

Limitation of plantings: The legislation enacted to control production was mild in nature up to the decree laws of October 1935. The primary aim of the measures was valorization and support to the income of the wheat producer, and Parliament probably could not, under the intentions avowed, provide for much restriction in production because of the strength of the agricultural opposition. Furthermore, such reduction did not appear desirable in the light of the political situation in Europe at that time. The efforts were therefore directed toward preventing a further increase, although they were given the ambitious appellation of "permanent strengthening" for the wheat market.

The first step in restricting production was taken by the law of December 28, 1933, which reads in part:

> "It is prohibited to grow wheat on land which bore this cereal the preceding year."

Certain penalties were provided. A year later the law of December 24, 1934, carried further restrictions, as follows:

> "It is prohibited to sow wheat on areas larger than those established by local custom for the rotation of crops. It is also prohibited to cultivate wheat on soil which bore wheat the preceding year, except in regions where this

practice is traditional and with the reserve of an area of one hectare for family consumption.

Finally, it is prohibited to increase the area sown to wheat to more than the average of the 3 preceding years. However, for the 1935-36 crop year, this average shall be calculated on the basis of the 2 preceding years."

Penalties were again provided on an increased scale. A further article read as follows:

"The Government by decree of the Council of Ministers may revise and limit the list of varieties of seed wheat which may be put up for sale."

The above provisions continue on the statute books and may be considered to have been in effect in recent years. In the winter of 1937, for example, the Wheat Board issued a circular reminding producers that such laws were in force and should not be violated.

There were two other sets of regulations that may be taken as partly directed toward influencing production. Under the decree law of October 1935 and that establishing the National Wheat Board, means of surplus disposition are provided, which penalize surplus production. They have not been operative, however, and have not yet had an influence on production. Their effect would be confiscation of the surplus or, under the system now in use, differentially lower prices for the surplus. In the long run, they would mean a smaller return per unit for the farmer and the same purpose could be obtained by lower fixed prices generally.

As regards the control of area, the action taken in 1933 could not be expected to affect plantings to any great extent. France has a system of polyculture, wheat frequently forming a part of the crop rotation. In a few areas wheat is grown extensively as a major crop, but the mass effect of any changes in such areas could be little since they would be compensated for by changes in other regions. Moreover, the law became effective at the end of the calendar year 1933, when winter wheat had been planted, and therefore could not cause much change, as spring plantings contribute only a small percentage of the total. Actually, according to the Government crop estimates, spring plantings for that crop year show a decided increase over the previous seasons (see table 7). In point of time, one is brought to the provisions of the law of December 24, 1934. As in the preceding year, the measures were enacted after most of the crop was in the ground. The new regulations appeared to give more extensive control, but several points which lessened their force must be taken into consideration.

The prohibition against sowing areas larger than those established by local custom is of little value. In the first place, it would,

if enforced, prevent an increase but would not effect a "permanent strengthening." Further, local custom is hard to define and to put into quantitative terms. Finally, the enforcement of such a law is problematical.

The prohibition clause of the law of 1933 was incorporated in the new legislation, but exceptions were granted which tended to remove its force. To prohibit "the cultivation of wheat on soil which bore wheat in the preceding year except in regions where this practice is traditional, and with a reserve of an area of one hectare for family consumption", means little under French conditions of culture. The final method of limiting plantings - the prohibition of sowing more than the average of the 3 preceding years - has the merit of being definite and quantitative. But it is subject to the same weakness as all the prohibitions, namely, lack of enforcibility. So far as can be ascertained, little effort has been made to see that the provisions of the law restricting plantings have been enforced.

Control of seed supplies: The control over seed use likewise did not prove practical. It was thought possible to reduce production and improve the quality of the wheat at one and the same time by restricting plantings to a chosen list of varieties. It was said that control would be easy, since most sales of seed are in the hands of a few relatively large firms. But as a matter of fact, the farmer provides himself with a large portion of his seed wheat, and any sudden restriction results merely in his providing all of his requirements or buying from his neighbors.

Table 7. Area and production of wheat, 1912-13 and 1926-27 to 1935-36

Year	Area				Production	
	May 1 estimate			Total harvested	Preliminary	Final
	Winter	Spring	Total			
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 bushels	1,000 bushels
1912-13..	15,638	528	16,166	16,166	-	319,368
1926-27..	12,796	269	13,065	13,065	-	276,126
1927-28..	12,392	564	12,956	12,956	-	281,283
1928-29..	12,956	380	13,336	13,336	-	337,250
1929-30..	12,765	514	13,279	13,279	231,118	228,104
1930-31..	11,799	1,115	12,914	12,840	269,630	264,116
1931-32..	12,973	456	13,429	13,429	331,356	a/ 363,750
1932-33..	13,311	192	13,503	13,503	338,663	362,328
1933-34..	12,863	339	13,202	13,354	307,150	338,511
1934-35..	13,091	143	13,234	13,251	278,765	284,949
1935-36..	12,469	242	12,711	-	244,349	-

a/ Not official.

Production control had little effect: In table 7 the final area for 1933-34 is recorded as smaller than that for 1932-33. This fact cannot be attributed to the law of December 1933, for winter plantings were already in the ground and spring plantings showed a substantial increase. In the following season, under the same law, fall planting increased over the previous season. Then after the law of December 1934, spring plantings were smaller. For this, however, a much more reasonable explanation than the operation of the new regulations can be given: namely, the inverse relation observable between winter and spring sowings.

It is true that the area has successively declined each year since 1932-33. The 13,503,000 acres of that season were, however, the largest area in recent times, and a decrease was natural. From 1932-33 to 1933-34 the decline was slightly over 1.1 percent; from 1933-34 to 1934-35, less than 1 percent; and from 1934-35 to the preliminary figure of 1935-36, slightly over 4 percent. The slight declines in 1933-34 and 1934-35 from the 1932-33 acreage are not significant, and the area in 1935-36 showed a decline, principally because of extensive damage from floods in the spring of 1936.

On the whole, the legislation for direct control of area enacted since December 1933 has not been an influencing factor. The reasons are quite plain. It provided no incentive to producers to reduce their plantings; its prohibitive features were not readily enforceable; and, finally, the administration does not appear to have been adequate to attempt serious enforcement.

The storage program

The various measures of storing wheat were complicated and introduced no little confusion into the grain trade. Two ideas were employed: carry-over from one year to the next and "stockage", or storing during the crop year. The first was to take grain off the market for carry-over into the following year, the thought being to valorize it during a surplus season and reduce imports in years when a deficit occurred. Unfortunately the deficits did not occur at the time when they were most desired. The second grew out of the idea of orderly marketing. It was said that prices for wheat always fell radically at harvest time because of too large offers and rose to higher levels later in the year. By a stockage program it was expected that offers could be "reduced" early in the season, the stored grain to be sold later and the average price for the season raised. In the later years of the program, there was not much distinction between the two ideas, stockage at the end of a crop year becoming carry-over into the following season. Apart from the first 2 years, when few contracts were made for carry-over, the whole storage program can be considered as a unit.

The first method was for the direct constitution of stocks by the Government. In 1930 the construction of permanent depots was authorized

and the construction of a series of other warehouses for cereals encouraged. While this was done by private individuals, the price of the stored wheat was guaranteed through the Quartermasters Corps. In September of the same year, it was decided that storing by agricultural groups would be desirable and should be encouraged. These groups are a type of cooperative and under the laws of France could be quickly and rather easily organized. To induce stockage by them and the signing of the contracts by which the holders were bound to sell on a gradual scale during the season, a premium was paid. Once this program got under way it moved quite rapidly, for a minimum price guaranty was also provided. Under the conditions existing at that time (1930 and 1931), it was apparently quite successful. But after the crop of 1932, such large amounts were left for carry-over into the following year that additional action had to be undertaken.

With a free wheat market and sufficient funds for storage premiums, there appears no outstanding reason why the program should not have been carried through a series of years with moderate success. In July 1933, however, fixed prices were instituted, which greatly complicated the whole situation, for the old carry-over grain had to be forced into consumption. To do this, the Government decreed obligatory percentages of the various categories of grain which millers had to employ. This type of regulation grew increasingly complicated as surpluses from successive crops piled up with various prices in effect. In the fall of 1934, for example, millers had to use a given percentage of 1932 and 1933 carry-over wheat at 131.50 francs per quintal, a percentage of 1934 stocked wheat at 108 francs per quintal, and could purchase for the balance unstocked wheat presumably at 108 francs. Later there were three different prices. Under these conditions the system was difficult to manage and the picture of its activity is clouded by other factors.

The quantities for which stockage and carry-over premiums were definitely paid for some years are shown by the following data:

Crop of year	Storage contracts	Carry-over contracts
	Bushels	Bushels
1930	1,228,000	-
1931	3,303,000	-
1932	10,762,000	20,826,000
1933	69,864,000	79,780,000
1934 a/	80,305,000	40,400,000

a/ Later data not available.

The provisions relating to storage premiums and the possibility of requiring millers to use various percentages from the different crops and of controlling the amount of such stored wheat marketed each month

remained as part of the wheat laws. Something of a new departure took place under the National Wheat Board in 1936, since most of the grain is now handled through wheat cooperatives at fixed prices and a scale of marketings required.

Stockage unnecessary with fixed prices: The two main divisions of the storage scheme - that is, stocking during a season and carry-over - did not work out to equal advantage. First, the stockage within a season was superfluous during the time in which fixed minimum prices were in effect. Such stockage was supposed to limit supplies early in the season and thus support prices. As prices were fixed from July 1933 to December 1934 for all wheat and after December 1934 for some of the stocked wheat, the stockage was merely an added complication, unless it is to be admitted that fixed prices were ineffectual, in which case storing might have had some influence. This possible influence was largely attenuated, however, because of the change in millers' buying habits.

Prior to the storage program it was the general practice for millers to keep sufficient wheat on hand to supply requirements some time in advance. When the Government required the use of certain percentages of stored or carry-over wheat and the percentage changed from time to time, millers were afraid to accumulate stocks of any given class of grain, since a cheaper class might soon be allowed more extensive use. The storage program therefore changed to a degree the holding of grain from farmers, dealers, and millers to the cooperative groups.

After the fixed prices were removed on one class of grain at the end of 1934, the stored wheat should have played a role in price support through the regulation of supplies. The point discussed above, however, played an important part in keeping prices down. Millers were not eager to buy "free" wheat when the percentages of 1933 carry-over and 1934 stocked wheat might subsequently be raised. Similarly they did not buy extra quantities of the stored wheat, for if the percentages were to be lowered they would lose. This may be charged in part to the lack of an announced policy on the part of the directing officials. It appears on the whole that the stockage program was mainly ineffectual as a price-supporting measure, combined as it was with other measures.

Carry-over plan successful: Insofar as stockage became carry-over, the program was partly successful. Carrying over wheat from a surplus year to the next season was done in the hope that the next season would permit the utilization of the excess. If no control over production is provided, this procedure is merely gambling with nature at unknown odds. In the case of French wheat, the carry-over program was for a time a losing game. From 1931 through 1934, production exceeded requirements, and even in 1935 when the crop was small a surplus of domestic grain existed because of the carry-over from earlier years. Partly as a result of the small 1935 harvest, but mainly because of the short 1936 crop, the surplus was finally used up.

Another troublesome feature of the storage program was increased wastage and greater expense of storage. It has frequently been charged by the trade that storage by the cooperative groups was unnatural in that such organizations were definitely fostered by the Government and could not compete in ordinary commercial storage methods, either professional warehousing or farm storage. It was maintained that inability to compete indicated abnormal costs which would not have been borne by the grain had the Government not given financial encouragement in the form of storage premiums. Balance sheets of some storage cooperatives that have been published show heavy charges to farmer members, but these may not be true of the whole group of cooperatives. It does appear, however, that the growth of storing by quickly organized agricultural groups, generally not possessing adequate facilities, has been an expensive method of doing business.

Because facilities were not of the best, there has undoubtedly been a greater degree of wastage than normal. The mere fact that grain was held over for several seasons caused losses. During the fall of 1934 there was still some grain left from the 1932 harvest.

Granting that the subsidized carry-over was a gamble and that costs and waste were above normal, the storage program had definite elements of value. Stocks carried over under contract and for which the sale was regulated by Government order could for a time be removed from available market supplies just as though the grain had been denatured or exported. The carry-over from the 1932 crop was not large, but contracts covering 80,000,000 bushels from the 1932-33 and 1933-34 crops for carry-over into the 1934-35 season are significant.

Several years went by before the carry-over could be used with profit, but storage, together with the security stock, permitted carry-overs that in large part were firmly held, thus reducing their price depressing influence. When finally short production of grain required the use of stocks, the difficult foreign trade position of France was eased to the extent that foreign purchases were not necessary.

The exact cost of the program is not known, but in total it was something over 220,000,000 francs, apart from the security stock. Compared with this, the export program from July 1933 to August 1935 required more than 980,000,000 francs.

Denaturing would have been less costly than exporting but its use would have been far more expensive than subsidizing carry-over. It is not possible to compute per-bushel per-year costs of storing, as definite data have never been released, storage contracts were converted into carry-over contracts at year ends, and other operations

intervened. The carry-over part of the policy did not work out freely or exert the influence for which it was designed because fixed prices were in effect. As a measure, however, its usefulness was shown after fixed prices were removed. Had there been no restrictions on marketing in the early summer of 1935, a debacle would likely have occurred.

Government security stocks: Another part of the wheat storage program was the so-called security stock set-up under the law of December 24, 1934, whereby the Government proceeded to purchase and withhold from the market under certain conditions a quantity of 22,000,000 bushels. Purchase of this was made through the Quartermasters Corps of the army and the grain was presumably to be used for military supplies unless a distinct shortage showed that it was advisable to sell it on the open market. Of the 22,000,000 bushels, about one-half was purchased as free wheat and about one-half as stored wheat. Difficulties of conservation developed, and eventually a large portion of this stock was disposed of or exported under a complicated export arrangement. This was an expensive operation, since the grain was purchased outright by the Government for nearly 510,000,000 francs. Not all this amount can be charged directly to the wheat program, for such supplies are a part of military provisioning and, in addition, some of the cost can be attributed to national security.

On the whole, the carry-over program succeeded; and, while a number of years passed before any of the surplus was required, it enabled the use of domestic wheat at the time needed at less cost than that at which some of the surplus was disposed of by other measures. In evaluating it, one must keep in mind that it formed part of a scheme to deal with the surplus and to valorize the several harvests.

The production position of France makes a carry-over program feasible where it might prove quite unsuccessful in a country normally an exporter. France, normally an importer or at least a nation in which crop shortages are likely to develop and in which a protected price level usually exists, can afford the cost of storage much better than an exporting nation. While in surplus years it is frankly a valorization scheme, it is not so in deficit years in France. It does not partake of the economic hazards involved in price level changes that occur in a normally surplus country, except when used as a type of insurance against price changes, in which case it becomes an insurance scheme rather than a surplus-control plan.

Price fixing

The outstanding move to valorize wheat in France was the fixing of minimum prices. As the term implies, such prices were those below

which no transactions in wheat could be made. The rates were fixed by law with little regard to supply or other market factors.

Two periods must be distinguished in the fixed-price system of France: first, the main period up to the law of December 1934 and, second, the period following the establishment of the National Wheat Board. During the first period, the efforts were clearly those of valorization in keeping with the whole program; but, under the Wheat Board, political considerations resulted in fixed prices in 1936-37 lower than those that might have ruled in a free market. The whole organization and philosophy of the two periods differ, and they are therefore discussed separately.

Price fixing prior to December 1934: The first establishment of a market price for wheat was accomplished not only to comply with popular farm demand but also to help the Government out of an awkward situation in its carry-over scheme. At the beginning of the calendar year 1933, in order to sustain the market and to encourage the storage program, the authorities decreed that wheat stocked under contract could not be sold below a certain price. This price was guaranteed by the Government. It began with 109 francs per quintal following the law of January 26, 1933, and was raised to 115 francs by a decree of March 8, 1933. As these rates were above the price for free wheat, producers signed contracts readily and the State gave guaranty on 20,800,000 bushels. Open-market prices continued to decline, however, and the Government had to decide whether to pay its obligations, which would have cost a great deal, or to abandon the fixed price, which would have further lowered the market and ruined a large number of agricultural cooperatives.

Eventually minimum-price obligations for all wheat transactions were established by the law of July 10, 1933. The first article stated:

> "For the period from July 15, 1933, to July 15, 1934, the minimum price below which a quintal of wheat destined for human consumption may not be sold is fixed at 115 francs per quintal. This price will be increased by 1.50 francs per quintal on the first of each month, the first increase being applicable on September 1. This price is exclusive of all expenses of brokerage, commission, or transport. It applies to wheat of sound, merchantable quality, of a specific weight at least equal to 76 kilos per hectoliter."

With prices thus fixed and increasing month by month, it was thought desirable to provide that wheat carried over into the 1934-35 year should continue to be supported. By the law of December 28, 1933, that of July was modified to allow the minimum price of 131.50 francs per quintal, which would be reached on July 15, 1934, to apply to all the surplus of the

1933 crop not otherwise disposed of by July 1, 1934. A further change was made at the beginning of the 1934-35 year, when by a law of July 9, 1934, the minimum price was fixed at 108 francs for wheat of a specific weight of 74 kilos. At the beginning of the 1934-35 year, then, there were two prices prevailing: 131.50 francs per quintal for the wheat carried over from 1933, and 108 francs for 1934 wheat, either stocked or free.

The last change in price legislation was the law of December 23, 1934, which abolished minimum prices on free wheat. Such pegged rates could be reestablished by decree. The law maintained the price for 1933 carry-over wheat, but a drop to 97 francs was made for 1934 stocked wheat. To carry out its obligation to maintain the price of stocked wheat at 108 francs per quintal, a grant of 11 francs per quintal was made on half of the 1934 stocked wheat. Presumably one-half had already been consumed and by this grant the other half would realize 108 francs.

During the period January to June 1935, there were only two prices, since the 1933 carry-over had been exhausted. The rate of 97 francs for 1934 stocked wheat was not applicable after July 1, but a price of 88 francs per quintal for such wheat was continued by a separate operation, while free wheat continued to enjoy an open market.

A number of reasons why prices should be fixed were advanced when the law of July 10, 1933, was under discussion. These need not be gone into, but it is interesting that the rate was set at 115 francs, exactly the amount of guaranty on the carry-over grain, and that it was called temporary and exceptional in character.

Fixed prices led to abuses: Results of this measure of valorization were what might be expected. Naturally enough, when farmers needed cash badly and could sell readily only by accepting discounts, then discounts were accepted.

Many a ruse was employed to circumvent the law: More grain was delivered than necessary; secondary cereals were included as a "gift" when wheat was sold; transportation was paid by the seller; the seller agreed to buy at abnormal prices the fertilizer or other products of the purchaser. Secret rebates and all the other tricks were used. Not the least were outright sales at less than legal rates. Wheat thus sold quickly became known as "gangster" wheat.

Naturally enough, no complete record of "gangster" activities is available, although during June 1934 the "Bulletin des Halles" gave daily quotations on "gangster" wheat. As illustrative of the difficulties between official and "gangster" rates, many quotations have been sought out and classified in monthly ranges. This series of "gangster" prices

is given with the market prices in table 8. The fixed prices were to be paid at the farm. During this period, the market at Paris also gave quotations, but they were based on the official rates and did not reflect true conditions from July 1933 to January 1935.

Widespread "gangster" sales - publicly admitted in the Chamber of Deputies - higher than necessary bread prices, and signs of a breakdown in the whole system led to a partial abandonment of the scheme in the law of December 1934.

Table 8. Market quotations and "gangster" prices per quintal of wheat, May - December 1934

1934	Prices as fixed by law		Paris market price, official quotations	"Gangster" prices
	1932 and 1933 crop	1934 crop		
	Francs	Francs	Francs	Francs
May	128.50		130.80	85-95
June	131.00		132.00	95-105
July	131.50	108	121.80	85-100
August	131.50	108	110.00	84
September	131.50	108	110.00	89
October	131.50	108	110.00	
November	131.50	108	111.00	80
December	131.50	108	80.00	65-75

1 quintal = 3.67 bushels; 1 franc = 6.6 cents.

Insofar as the price-fixing feature of the valorization scheme can be considered apart from the whole, it may be said to have been costly to the consuming public, to have created inequities among members of the industry, and to have brought on a more general disregard for law observance. The most that can be said in its favor is that it probably maintained average returns at a higher level than otherwise would have been the case. In spite of much illicit trading, a large portion was sold at or near the official market prices and returns to agriculture as a whole were thereby raised from what they would have been under a condition of free competition on the domestic market.

Price fixing reinstituted under Wheat Board: Both economic and political considerations are involved in the second phase of price fixing. During the 1934-35 crop year after the removal of fixed prices in December, the market fell somewhat but remained more or less steady in the spring months. While the 1935 crop was of deficit proportions, carry-over and colonial supplies were still sufficient to constitute a surplus, and prices fell further in July and August to reach the lowest point in many

years. The market improved during 1935-36 and was around 100 francs per quintal before the 1936 harvest. Producers had been hit by the low prices of the preceding year and earnestly desired the return of the artificial market, which had been in large part responsible for their predicament. These conditions by themselves would probably not have resulted in any new legislation, because the 1936 crop was forecast at less than requirements and prospects were for a substantial price increase during the fall and winter. Existing dissatisfaction with returns, however, made the National Wheat Board acceptable to farmers.

The idea of the National Wheat Board had for several years been a part of the program of the Socialist Party. With their rise to power in the Popular Front Government (comprising Radical Socialists, Socialists, and Communists) the plan was put through Parliament. Its original form would have eliminated the grain trade entirely, virtually made price fixing a function of the cabinet in power, forced all handling and marketing to be conducted by cooperatives, and generally constituted a throughgoing state socialism in wheat handling very similar to that of Italy. The activities and form would probably have been much the same under a Right Fascist Government or a Left Democratic Government, except in name.

During discussion of the bill, the Senate objected to elimination of all private commerce, and made price fixing possible by the Council of the Wheat Board. These retentions were more in principle than in fact, as experience has shown.

As provided in the law of August 1936, which established the National Wheat Board, the price of wheat in France is fixed at point of production by the Central Council. In order to do this, a crop forecast is made late in June, and at the same time the Council is supposed to determine the amount of wheat that each producer who has sold more than 100 quintals (367 bushels) in the preceding year may deliver for sale. This sales quota, as it were, is fixed as a temporary measure until definite information on the harvest of each producer becomes available in September. Farmers' crop declarations, together with information concerning stocks, available supplies, etc., help the Council of the Wheat office to fix the rate of grain marketing permitted by law. This is somewhat similar to the system in operation under the storage and carry-over program previously discussed. Under present regulations, it applies to all wheat for sale in France and permits a regulation of the flow of supplies.

The principle of price fixing contained in the law rests essentially on the theory that a certain relation between the price which the farmer receives for his products and what he pays for goods is desirable. The mechanics of setting the price are complicated, with the central idea

being to fix wheat prices in relation to those that existed in a pre-war period. The language of the act states:

> "In the second half of August the Central Council will examine the propositions of the Department Committees and, taking into account the size of the crop, will fix the price of wheat at point of production, by applying to the average price of the 1911, 1912, and 1913 crops, as shown by the official quotations of the Paris market, a coefficient which may in no case be smaller than the coefficient of average increase, as compared with 1914, of the weighted index of the cost of living, products or objects of current usage in farming, wages, and all charges against production."

It is not entirely clear just what this means, and students of French syntax have been at some loss to explain it, the point of doubt being whether the price will arbitrarily be the result of the coefficent applied to the average of the chosen years or whether it is only one factor to be used along with a second factor, the size of the crop, as a basis for the Council's decision. During parliamentary debate on this particular passage, the Minister of Agriculture stated that he was opposed to the measure, as it would require raising the price by a definite coefficient, thus indicating his belief that the price would be automatically set.

The price at the beginning of the 1936-37 season was not set by the Wheat Board by using the coefficient, which would have meant a price of 165 francs, but at the considerably lower figure of 140 francs per quintal. On the basic rate of 140 in September 1936, monthly increases were provided of 1 franc per quintal through January 1937, and thereafter 1.50 francs to July 1937, making the July price 153 francs per quintal. This scale is for wheat of 72 kilos per hectoliter specific weight. Generally, market quotations are on the basis of 76 kilos per hectoliter and, conforming to previous commercial practice, grain of such weight would not be 140 francs but 144 francs, rising to 157 in July 1937. For wheat of 59 pounds per bushel, the price scale in France during 1936-37 would rise from $1.82 per bushel to $1.98 (1 franc = 4.65 cents).

Objections to the 1936-37 price: Objections to this price scale were raised immediately. The Wheat Producers Association voiced bitter protest and their President, a member of the Central Council of the National Wheat Board resigned from it, stating that the farmers had been deceived, that the price was fixed illegally since the coefficient of increase was not applied, and that the whole question was merely one of penalizing farmers for the benefit of workers represented by the new Government. He stated the price should have started at 165 francs per quintal ($2.09 per bushel).

During the fall months of 1936 there was dissatisfaction with the price from organized groups. Complaint was not general, however; the farmer, comparing current prices with those of the preceding year, was pleased. During the winter new factors entered the picture, and demands for price increases became general. These new factors were the increased cost of goods and labor and the increase in the world market price of wheat. The Senate finally passed a resolution in mandatory terms, calling on the Minister of Agriculture to take appropriate action.

Following devaluation of the franc at the end of September 1936 and the new labor contracts providing for higher wages and shorter hours for industrial workers, prices began to rise. The index of wholesale prices covering 126 articles rose from March 1936 to March 1937 by 47 percent. That part of the index represented by industrial goods rose by 61 percent, the agricultural products by only 33 percent. Furthermore, retail prices during the same period rose by 27.4 percent. The increased costs to the farmer are readily apparent, and in addition he was faced with higher farm labor wages and larger family allowances to farm workers. These increased costs naturally created dissatisfaction with the fixed wheat prices.

The dissatisfaction increased as world wheat prices rose. In December 1936, for example, foreign wheat was selling at around 100 francs per quintal, which together with the import duty and other taxes would have brought its price in France to around 187 francs per quintal ($2.37 per bushel). It was argued that with a free market French wheat prices would have equaled the above figure. While this is problematical, it does appear that, had a free market existed, wheat prices would have exceeded the fixed prices during recent months. Such prices, however, might have meant an increase in the cost of bread, which would have subjected the Government to severe criticism from the industrial and consumer groups.

Results Costly and Only Partially Effective

The wheat-control program in France, while stimulated by economic conditions, was partly a response to political ideas. The program as a whole was not satisfactory because it provided for no effective control of wheat acreage.

The most effective part of the program appears to have been those measures designed to control imports, namely, import duties, mixing regulations, and import licenses. It is probable that no one of these would have proved satisfactory in itself. Taken as a group, however, they were very effective, partly because of their low cost and flexibility.

Methods of reducing the surplus appear to have been costly when viewed in the light of results obtained. Subsidized exports were a

definite surplus-reducing measure because they effectively moved the grain out of the country and did not allow it to burden any competitive product. Its unit cost, however, was tremendous. Denaturing removed considerable wheat from the bread-grain market. Its disadvantage was the competition set up between the denatured feed wheat and other feed grains. The cost of this operation was rather high. As a means of surplus disposition, reduced flour extraction was a definite failure, difficult to control and supervise, thereby giving rise to inequity and fraud.

Although acreage control was definitely provided for, there does not appear to have been any serious attempt to influence the area planted to wheat. The French farmer was given no inducements, and no appeal was made to his self-interest. Only a determined display of force, therefore, could have accomplished a reduction in acreage, but this the Government was reluctant to use. The failure to provide an effective control, of acreage was no doubt due in part to the fear of upsetting the social order within the country and to the unsettled political conditions existing in Europe at that time.

As consumption of wheat in France is expected to continue the decline noted for a number of years, the Government may ultimately be forced to bring about some restriction of wheat acreage in order to avoid the problems associated with a permanent wheat surplus.

That part of the storage program which provided for carrying over the grain from one year to the next was successful, and under conditions existing in France, where production is normally below consumption requirements, a carry-over program would seem to be the most desirable method of handling the situation in years when a surplus of wheat is produced. From a practical standpoint, the stockage of grain, in other words withholding the grain from the market until later in the crop year, is unnecessary when fixed prices are introduced.

The technique employed in the field of direct price control was not satisfactory, principally because there was no adequate control over supplies, but partly because enforcement machinery was inadequate.

The fixed-price system, which broke down in 1934, does appear to have increased returns to wheat producers. There was assistance in this respect, however, from the carry-over and surplus-disposition programs. The cost of bread was increased to a greater extent than were the returns to farmers, as bread prices were based on official wheat prices, the full benefit of which was not obtained by the farmer because of fraud and increased trade margins.

The cost of the surplus-removal and storage programs was apparently in excess of 2-1/2 billion francs. If the refunded customs duties for the years 1929, 1930, and 1931 are included in the cost,

the total is increased by another 200 million francs. Most of this sum was expended during the crop years 1933-34 and 1934-35. As an indication of the relative cost of the various features of the program, estimated expenditures for the major operations up to the summer of 1935 are shown in the following tabulation.

	Francs
Denaturing	498,044,000
Exporting	930,625,000
Storage program	339,000,000
Security stock	509,727,000
Transport premiums	10,704,000
Subventions to colonies	9,400,000
	2,347,500,000

At prevailing rates of exchange, the total of the above expenditures incurred between July 1933 and the summer of 1935 was in excess of $115,000,000, and an additional $10,000,000 was expended between 1929 and 1933. There is no way of estimating precisely the cost per bushel of the control program, but it would probably be in the neighborhood of 75 cents.

It should also be borne in mind that, in addition to the above direct costs, French consumers were required to contribute a great deal more in the form of higher prices paid for flour and bread. From the middle of 1933 to the middle of 1936, it has been estimated that French consumers were required to pay out 13-1/2 billion francs (approximately $600,000,000 at the present rate of exchange) in excess of what the wheat would have cost them had they been able to obtain it at world market prices.

The financing of the program was provided for by the issuance of Government loans, the repayment of which was guaranteed partly by customs receipts on imported wheat and partly by production, milling, and sales taxes on wheat.

Future control of wheat in France now rests with the National Wheat Board, which is vested with the power to do practically all of the things that have been attempted in recent years. Because of the experience gained with previous control measures, the efficiency of the new Board should be greater, the control more positive, and the costs lower. The Board has already fixed the prices of wheat for the 1936-37 crop year and has arranged for the purchase of wheat in excess of a production quota at less than market prices. The storage problem will, no doubt, be simplified through the fostering of storage cooperatives. Imports and exports are now a Government monopoly. The only control that has not yet been effectively provided for is that of acreage.

While sufficient time has not elapsed to permit an evaluation of the significance of the new wheat policy involving the establishment of a National Wheat Board, one thing seems fairly clear. Under the present regime, measures to solve the wheat problem, at one time considered of interest only to agriculture, have become instruments of national policy, taking into consideration not only the welfare of farmers but that of other groups as well.

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THE LONDON SUGAR AGREEMENT....

On May 6, 1937, delegates of 21 major sugar producing and consuming countries approved at London a 5-year international sugar agreement, which, if subsequently ratified by the respective governments, may eventually exert a profound influence on the world sugar industry. With the signatory nations representing between 85 and 90 percent of the world's total sugar production, about 85 percent of world consumption, and nearly all of the sugar that enters into international trade, the agreement far exceeds in scope, as well as in substance, the earlier attempt of sugar interests in important producing countries to regulate the world sugar industry through the Chadbourne Agreement (1931).

The primary objective of the latest negotiations was to establish and maintain an orderly relationship between the supply and demand for sugar in the world market, in a manner equitable to both producers and consumers. By regulating exports in accordance with import requirements in the world free market, it is hoped to eliminate the wide price fluctuations, which over a period of years have injured both producers and consumers, and to raise world sugar prices, which in 1936 were but little above those at the lowest point of the depression, to a level which will secure a fair return for efficient growers and producers. The agreement represents a cooperative effort on the part of both producing and consuming nations to improve the position of a commodity in which the continuation of world prices at unduly low levels has hindered recovery in international trade.

World Sugar Industry Long Depressed

The depression in the world sugar industry, which began earlier and has been of longer duration than that in most other major commodities, is in part an outgrowth of the World War. European beet-sugar production, which during the 5 years preceding the war (1909-10 to 1913-14) had averaged 7,846,000 short tons, declined to an average of 3,947,000 tons

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Prepared by E. P. Keeler, Senior Agricultural Economist, on the basis, in part, of a report from C. C. Taylor, Agricultural Attaché, London.

during the 5 years from 1916-17 to 1920-21. The wartime disruption of the European beet industry resulted in a marked increase in world production of cane sugar. This increased from a pre-war average of 10,540,000 tons to an average of 14,137,000 tons in the period 1916-17 to 1920-21. (See figure 1.)

By 1924-25, European beet-sugar production, at 7,772,000 short tons, had virtually recovered to its pre-war level. Meanwhile, however, world production of cane sugar continued to increase, reaching a figure of 17,712,000 tons in 1924-25. World sugar production, beet and cane, totaled 26,670,000 short tons in 1924-25, as compared with an average of 19,053,000 tons during the pre-war years from 1909-10 to 1913-14.

Despite the fact that the outturn of 1924-25 exceeded apparent consumption in that year by more than 2,000,000 tons and resulted in a sharp decline in world prices of raw sugar from an average of 4.17 cents per pound (c.i.f. United Kingdom) in 1924 to an average of 2.68 cents per pound in 1925, production showed an almost uninterrupted upward trend, and world prices a downward trend in 1930-31 until production reached a figure of 31,535,000 tons. While world consumption, under the stimulus of declining prices, showed substantial increases until the general economic depression made itself felt, the increases were not sufficient to keep pace with production. At the 1931 year-end (August 31) stocks were estimated at a record high of 14,507,000 tons. (See figure 2.) The world price of raw sugar in 1932 averaged 0.9 cent per pound, an all-time low. (See figure 3.)

Aside from the initial stimulus to cane-sugar production resulting from the withdrawal of European beet areas during the World War, other major factors contributed to the great increase in sugar production in the decade from 1920-21 to 1930-31. These factors can be summarized under the heads of (1) government intervention and (2) technological advances.

Earlier measures of important sugar deficit countries designed to restrict imports and to increase domestic production were strengthened during the 1920's, and new measures, usually in the form of tariff increases, quotas, or bounty systems, were adopted. With the major consuming countries producing at least part of their supplies, sugar has been particularly susceptible to government intervention. Many of the measures restricting imports, adopted in the first instance to protect existing domestic production against declining world prices of sugar, resulted in further increases in production in the deficit countries. At the same time, the higher prices in the protected markets tended to impede the general increase in per-capita consumption, which had been taking place as the result of the decline in world prices of sugar, and contributed to the surpluses that were piling up in the major exporting countries. Further, while the importing countries were decreasing their dependence on foreign sugar, a number of the exporting countries were endeavoring to

maintain or increase production, frequently through the maintenance of internal prices above world parity while exporting at world prices.

Technological advances, the second important factor in the overproduction of sugar in the late 1920's, have been particularly pronounced in the cane-sugar industry. Improved varieties of cane, improved and more intensive methods of cultivation, and more efficient methods of sugar extraction have contributed to the increase in cane-sugar production and to the lowering of costs of production.

Previous Attempt to Control Production

In 1931, in an endeavor to improve the position of the commodity, the sugar industries of seven (later, nine) exporting countries, 1/ which represented at that time about 40 percent of the world's sugar production and about 90 percent of the sugar entering into international trade, signed the convention generally known as the Chadbourne Agreement. Under the terms of this agreement, the member countries were to limit their exports to specific annual quotas. It was agreed that part of the yearly exports from the member countries would be from surplus stocks, and that the countries would endeavor to adjust production so that it would not exceed domestic consumption plus exports, less the quantity taken from surplus stocks. Surplus stocks were to be eliminated within the period of 5 years covered by the agreement.

The Chadbourne Agreement was entered into at a time when the general economic depression was increasing in severity, with the trend of world consumption of sugar turning downward in 1931-32 for the first time since the end of the World War. Further, no importing countries were parties to the agreement, and the barriers against imported sugar continued to increase, as did state intervention directed toward increased production in nonmember countries. As a result, exports of the agreement countries generally fell substantially short of their quota allowances.

The initiation of the Chadbourne Agreement was followed by a temporary decline in world sugar production to a total of 27,104,000 short tons in 1932-33, as compared with the total of 31,535,000 tons in 1930-31. Following the 1932-33 crop, world production again turned upward, and in 1934-35, the last year preceding the termination of the agreement on September 1, 1935, it reached a figure of 29,115,000 tons. World production has since increased to 31,426,000 tons in 1935-36 and to a preliminary figure of 33,317,000 tons in 1936-37.

1/ The original signatories were Cuba, Java, Germany, Czechoslovakia, Belgium, Poland, and Hungary, and subsequently, Peru and Yugoslavia.

SUGAR, CANE AND BEET: PRODUCTION IN THE WORLD AND IN SPECIFIED COUNTRIES, 1909-36

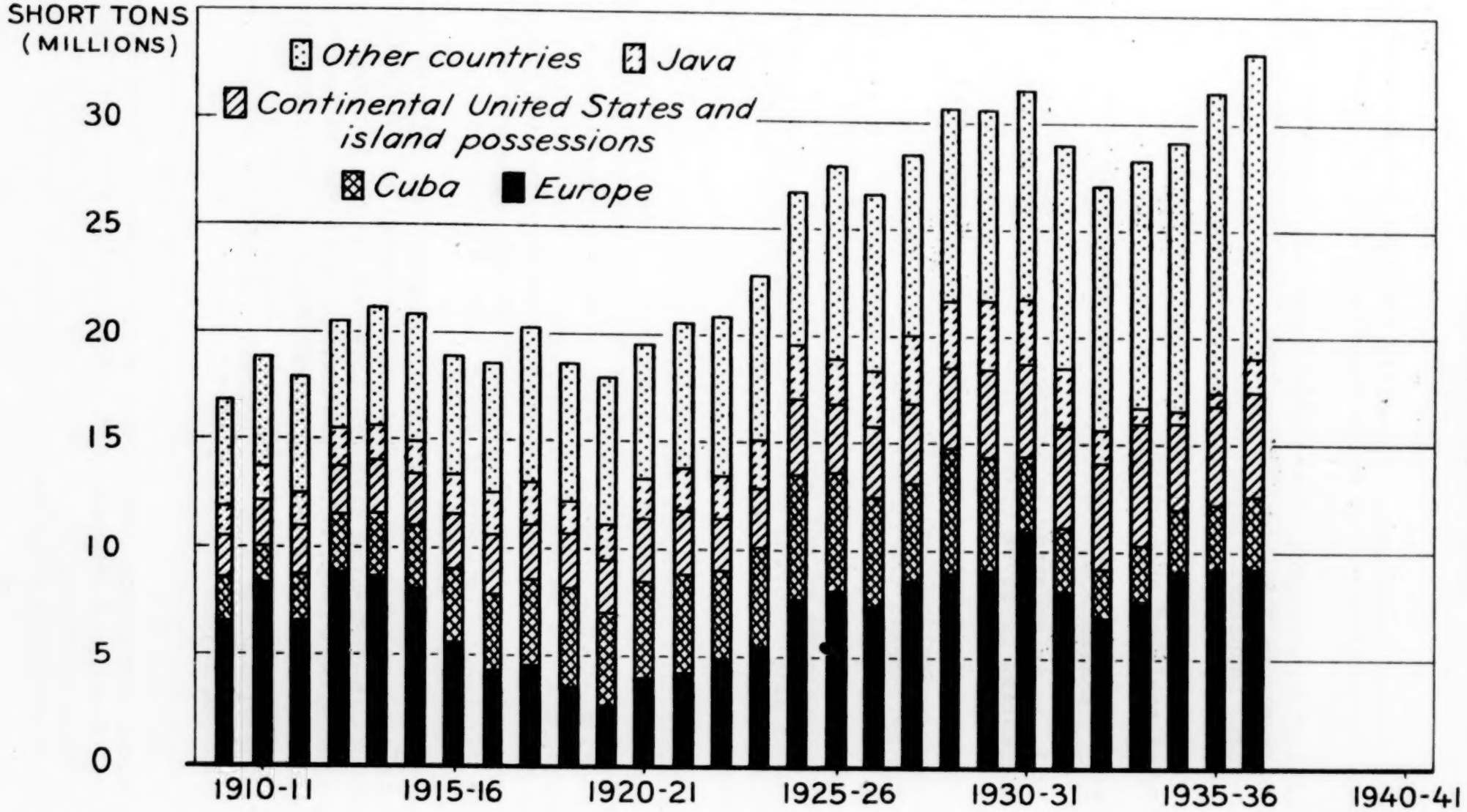

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FIGURE 1

SUGAR, CANE AND BEET: WORLD PRODUCTION AND CONSUMPTION, CROP YEARS 1922-23–1936-37

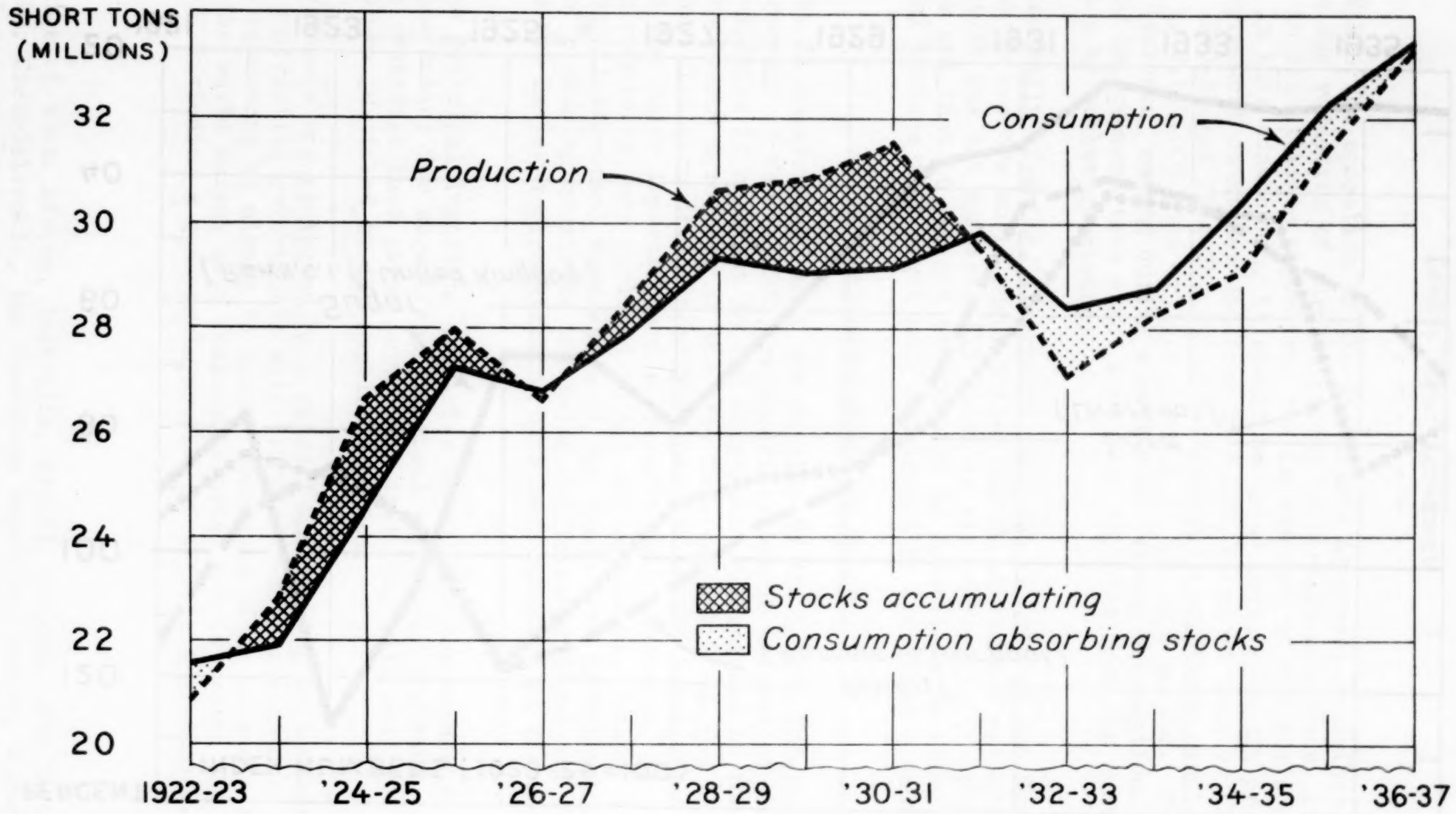

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FIGURE 2

PRICES OF LARD, WHEAT, AND SUGAR, 1921-36

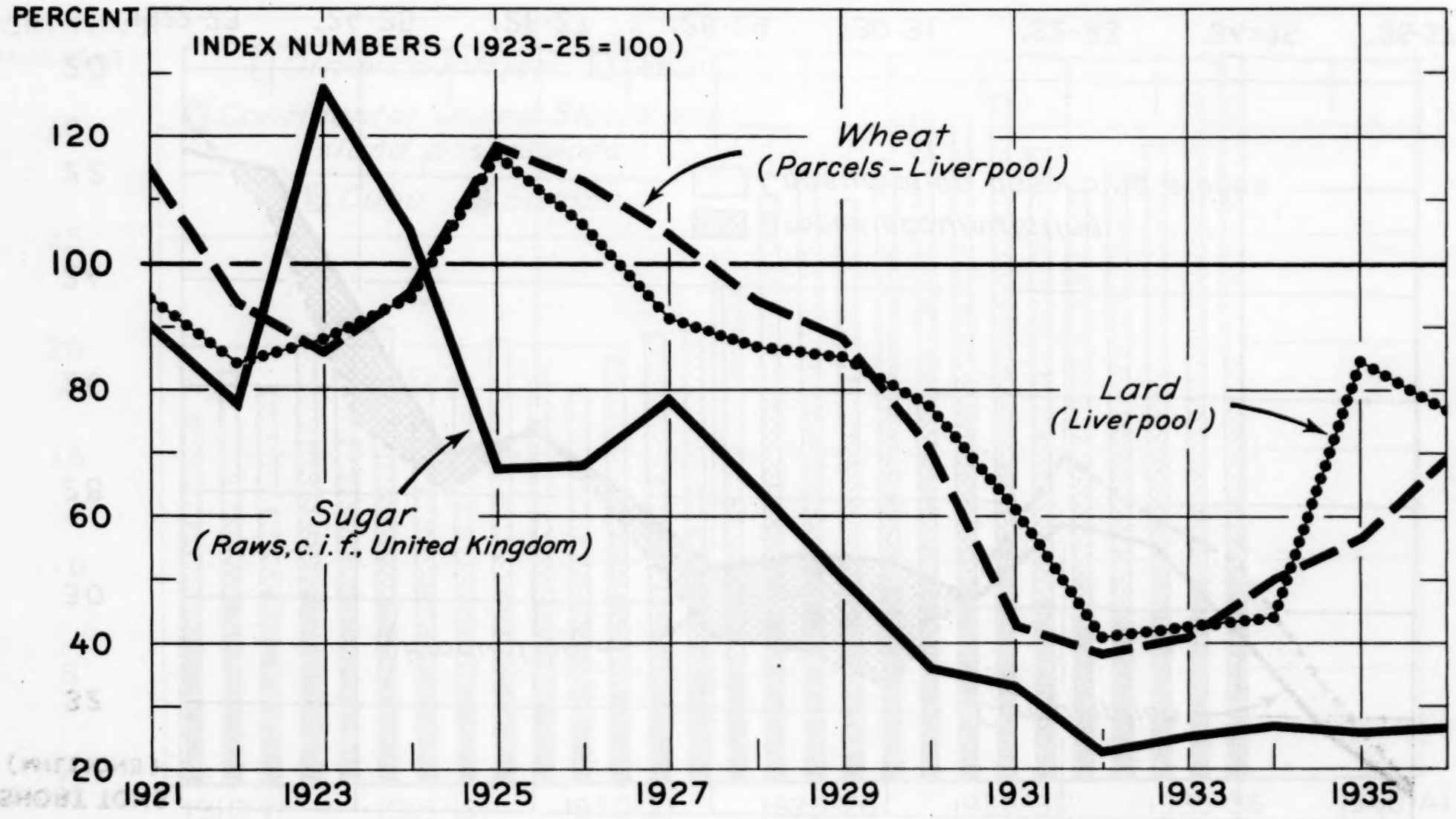

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FIGURE 3.-

While the operation of the Chadbourne Agreement contributed materially to the reduction of surplus stocks in certain countries, it did not succeed in its ultimate objective, the improvement of the world price of sugar. In this connection, it should be noted that, although production in the agreement countries declined by 5,237,000 short tons or 41.5 percent between 1930-31 and 1934-35, sugar production in nonmember countries increased by 2,817,000 tons or 14.9 percent in the same period. This offsetting increase, coming during a period of falling consumption, nullified the price improvement that might have been expected from the curtailment of production by member countries.

Generally speaking, it appears that the failure of the Chadbourne Agreement to improve world sugar prices may be attributed primarily to the fact that it was not sufficiently broad in its membership of producing countries and that it was not accompanied by reductions in trade barriers and fiscal burdens that might have substantially increased consumption.

New Agreement Broad in Scope

The 21 countries 2/ that are parties to the London International Sugar Agreement of May 6, 1937, represent almost 90 percent of the world sugar production in contrast to the 40 percent represented by the signatories of the Chadbourne Agreement at the time that agreement was put into operation. They also account for nearly 85 percent of the total world consumption, and the major importing and self-sufficient countries, as well as the exporting countries, are included in the new agreement. Hence, it appears that certain fundamental weaknesses of the Chadbourne Agreement, its membership of producing countries not being sufficiently broad and consuming countries not having representation, have been remedied in the new agreement.

The principal importing countries have given assurances tending to sustain the outlet for sugar from principal exporting countries, while the exporting countries have given assurances that they will restrict exports to the volume justified by the available market.

Consumers are protected by a general undertaking in the agreement that the contracting governments will "so direct the arrangements made under the agreement as always to assure consumers of an adequate supply of sugar on the world market at a reasonable price not to exceed the cost of production, including a reasonable profit, of efficient producers." It is

2/ The Union of South Africa, Australia, Brazil, Belgium, the United Kingdom, China, Cuba, Czechoslovakia, the Dominican Republic, France, Germany, Haiti, Hungary, India, the Netherlands, Peru, Poland, Portugal, the Soviet Union, the United States and the Philippines, and Yugoslavia.

also provided in the agreement that the amount of sugar to be made available in the world market may be increased when necessary, and administrative provision is made for such contingency. A further provision to protect consumers provides for action by any contracting government when there is an acute shortage of supply or an abnormal rise in world prices.

The provisions of the International Sugar Agreement, as signed at London on May 6, 1937, are summarized in the following paragraphs.

Undertakings of countries not exporting to the free market

The United States, in conformity with its existing import quota regulations, established under authority of the Jones-Costigan Act, agrees to permit the importation for consumption of at least the same proportion of full-duty sugar as at present. Since the current year's quota of full-duty sugar is set at slightly less than 27,000 short tons, this undertaking is of minor significance. If, however, the United States sugar quota to the Philippines should be reduced to a figure below the duty-free quotas under the Tydings-McDuffie Act (800,000 long tons 3/ of raw sugar, plus 50,000 long tons of refined sugar), the United States import quotas from foreign countries are to be correspondingly increased. If this happens, any sugar exported from Cuba to the United States under such quota increases will be subtracted from the world free market export quota allocated to Cuba under the International Agreement.

The Philippines undertake not to export sugar to countries other than the United States unless the above-mentioned United States quota for Philippine sugar is reduced, in which case they acquire a basic quota for exports to the world market equal to such curtailment. They also acquire a 4-percent share in any future addition to basic export quotas.

The United Kingdom, which is the second most important market for sugar, agrees to continue those provisions of its 1936 sugar legislation designed to limit domestic production to 560,000 long tons of white sugar and to limit exports of British colonial sugar to 965,254 metric tons 4/ per year. Australia and the Union of South Africa agree to limit exports to 406,423 and 209,000 metric tons per year, respectively. Canada, although not yet among the signatory nations, reaffirmed that during the term of the agreement it does not propose to stimulate the production of sugar by subsidy, increased protection, special remission of taxes, or similar measures. India undertakes not to export by sea except to Burma. India formerly imported large quantities of sugar, but most of such imports have been gradually displaced by domestic production. With this

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3/ 1 long ton = 2240 pounds or 1.12 short tons.
4/ 1 metric ton = 2204.6 pounds or 1.1023 short tons.

exception, the import requirements of the British Empire for nonpreferential sugar are sustained. As an additional protection to British consumers and as a possible advantage to British sugar producers, any further increase in consumption requirements of the United Kingdom, plus net import requirements of other parts of the British Empire will permit a proportional increase in the production quota of the United Kingdom and in the export quotas of Australia, South Africa, and the British colonies, whether or not a general increase in world requirements justifies a general increase in export quotas. Furthermore, although quotas are not generally transferable, unutilized British quotas may be redistributed among the United Kingdom, its colonies, Australia, and South Africa. This right, if exercised, will prevent the proportion of full-duty sugar imported into the United Kingdom from rising above its present level.

China agrees to endeavor to maintain its sugar-import requirements, presumably by increased consumption rather than by decreased production.

The Netherlands in Europe agrees to refrain from net exports of sugar but reserves the right to cover home market requirements by home production and imports from other parts of the Kingdom. Netherlands Guiana will export only to the Kingdom of the Netherlands.

Export quotas for the free market

Basic export quotas were set up for the 13 major countries selling to the free market, while participation in a reserve quota is assured to 2 other countries. The quotas were fixed in relation to recent exports to the free market, adjusted to meet special conditions affecting each country and confined to a total which seemed approximately equal to the expected requirements of the free market. The quotas may be reduced by a uniform percentage, not exceeding 5 percent, in either or both of the first 2 quota years if the International Sugar Council, which is charged with the administration of the agreement, votes that reductions are necessary in the light of subsequent estimates of free-market requirements. In subsequent years, unanimous consent of the countries having basic and reserve quotas is required. On the other hand, the Council by a three-fifths majority can increase the basic quotas and reserves pro rata in any year, reserving 4 percent of the increase for the Philippines. Free-market quotas cannot be transferred by one country to another, but the Council itself under certain circumstances can redistribute any part of an export quota that is unused in any quota year among other countries, pro rata according to the basic quotas. Unused quotas cannot be carried forward to the next year, except under special circumstances in the case of Czechoslovakia.

On the following page is a table showing the basic export quotas allotted to the exporting countries under the London Agreement.

Basic export quotas under the International Sugar Agreement

Country	Basic quotas	Renounced during quota year beginning September 1, 1937
	Metric tons a/	Metric tons a/
Belgium (including Belgian Congo)	20,000	5,000
Brazil	60,000	
Cuba	940,000	
Czechoslovakia	b/ 250,000	
Dominican Republic	400,000	
Germany	120,000	70,000
Haiti	32,500	
Hungary	40,000	20,000
Netherlands (including overseas territories)	1,050,000	
Portugal (including overseas territories)	30,000	
Peru	330,000	
Poland	120,000	20,000
U.S.S.R. (excluding exports to Mongolia, Tannu Tuva, and Sinkiang)	230,000	11,500
Total	3,622,500	
Yugoslavia (from reserve quota)	c/ 12,500	
France (from reserve quota)	d/ 35,000	22,500
Total	3,670,000	e/ 149,000

a/ Beet-sugar countries: raw sugar tel quel; white sugars converted to raw at 9 to 10. Cane-sugar countries: nature and types of sugar heretofore exported by each country.

b/ Plus extra allotments of 90,000, 60,000, and 25,000 tons in the respective years beginning September 1, 1937, 1938, and 1939, with steps to be taken to reduce acreage to correspond to these figures.

c/ Plus 2,500 tons if France renounces any part of its reserve.

d/ Plus any part of the reserve renounced by Yugoslavia.

e/ 25 percent, or at least 50,000 tons, of the quantities renounced may be redistributed to meet cases of special hardship, and at least 30,000 tons are declared available for this purpose even if it necessitates increasing the total.

Undertakings with reference to stocks

The governments to which export quotas were allotted agree to undertake to regulate production so that stocks in their respective countries, on a date yet to be fixed by the Council, shall not be more than 25 percent (30 percent for Hungary) of the country's annual production, nor, in respect of their cane-producing territories, less than 10 percent of their export quotas. Cuba, however, may have at the end of each calendar year stocks earmarked for the United States amounting to 30 percent of its export quota to the United States, plus 300,000 metric tons for the free market. The Netherlands East Indies is also permitted to have, on April 1 of each year, stocks not exceeding 500,000 metric tons. Nothing is said about maximum or minimum stocks in the group of countries that do not export to the free market. Under special circumstances, the Council may authorize stocks in excess of the established maximum.

Administration

There is set up a General Council, composed of delegates representing all of the contracting governments, and an Executive Committee of nine members, which are to administer the agreement through a Secretariat to be established in London. One hundred votes are divided among the various countries on the Council. Fifty-five votes are given to the 18 exporting countries, 5/ and 45 votes to the 4 importing countries. Of the latter, the United States and the United Kingdom (including the British Colonies) each have 17 votes, British India has 6, and China 5. Of the exporting countries, Cuba has 10 votes, the Netherlands 9, Russia 5, Germany 4, and the others 1, 2, or 3. Powers relating to quota revisions, determination of conditions under which nonsignatory governments may accede to the agreement, and recommendations concerning measures to be taken in case of infringement of the agreement are reserved to the Council. Any other powers that the Council may delegate to it may be exercised by the Executive Committee.

The Executive Committee consists of nine representatives, three of importing countries, three of cane-sugar-producing countries, and three of beet-sugar-producing countries, each of whom has one vote, with the exception of representatives of the United States and the United Kingdom, who each have two votes. The Chairman of the Council is an ex-officio member of the Executive Committee and may cast a deciding vote. Of the importing countries, the United States and the United Kingdom will have one representative each, while the third representative will

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5/ Comprised of the 15 countries exporting to the free market, for which basic or reserve quotas are established, and the Philippines, the Union of South Africa, and Australia.

be selected annually by the governments of India and China. Of the cane-sugar-producing countries, Cuba and the Netherlands, including Java, have permanent representation. The third member will change each year in the following order: Australia, the Dominican Republic, Peru, the Union of South Africa, and Brazil. A similar arrangement is made for rotating the composition of representatives of the beet-sugar-producing countries.

The expenses of delegations to the Council and of the members of the Executive Committee are to be defrayed by their respective governments, but all other expenses, including those of the Secretariat, are to be paid out of a fund to which the contracting governments are to contribute in proportion to their voting power on the Council. Except by unanimous consent, the expenses to be met out of the fund may not exceed £12,500 (approximately $62,000) in any year.

Miscellaneous provisions

Among the miscellaneous provisions are those relating to ratification, effective dates, renunciation, and sanctions in the event of infringement. If the Council shall decide that it is desirable that the contracting governments should prohibit or by any other means restrict the importation of sugar from a country that has infringed the agreement, taking such measures shall not be deemed to be contrary to any most-favored-nation rights which the offending government may enjoy.

A protocol annexed to the agreement and separately signed is not subject to ratification. It provides for bringing the Council into being and entrusts the United Kingdom with the necessary transitional measures. A temporary provisional Council is set up, which will function until the International Sugar Council is properly constituted. The protocol pledges the governments not to modify their production, export, and import situation in a manner contrary to the aims of the agreement prior to the date that it becomes effective.

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PROMOTION OF COTTON PRODUCTION IN SOUTHEASTERN EUROPE

Governmental encouragement of cotton expansion in southeastern Europe has been an interesting feature of the agrarian policies of several countries in that area during the past 4 or 5 years, according to a report received by the Bureau of Agricultural Economics from its Berlin office. Although cotton has been produced in southeastern Europe for many years, it was not until quite recently that any special consideration was devoted to the crop. Increased attention to the cultivation of cotton was brought about by the shortage of foreign exchange and a consequent effort to reduce dependence on imported cotton.

Among the measures adopted to accomplish this objective are the fixation of prices for the domestic cotton crop at levels higher than those prevailing for foreign growths in the world market, compulsory utilization of domestic cotton by the local textile mills, and taxation of imported cotton to create a fund with which to equalize prices and finance the various activities designed to increase cotton production.

As a result of these measures, the area and production of cotton in the four countries for which information is available has expanded very materially in recent years, as is shown in the following table:

Area and production of cotton in specified European countries

Country	Average 1928-29 to 1932-33		1936-37	
	Area	Production	Area	Production
	1,000 acres	1,000 bales a/	1,000 acres	1,000 bales a/
Greece.....	46.7	16.4	138.0	58.0
Bulgaria...	14.8	4.3	72.0	29.0
Yugoslavia..	2.2	.5	5.0	b/ 1.0
Rumania.....	.2	.1	4.0	1.0
Total.....	63.9	21.3	219.0	89.0

Compiled from official sources and the International Institute of Agriculture.
a/ Of 478 pounds, net. b/ Estimate for 1935-36.

There also has been a material expansion in the production of cotton in Turkey but the actual extent of this expansion is not definitely known.

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BRITISH GOVERNMENT PLANS ADDITIONAL AIDS TO FARMERS

A program providing for additional aids to farmers in the United Kingdom has recently been placed before Parliament by the British Ministry of Agriculture, according to a report to the Bureau of Agricultural Economics from its London office.

The program contemplates increasing the amount of home-grown wheat, for which the price of 10 shillings per hundredweight ($1.32 per bushel) is guaranteed, from the present maximum of 50,400,000 bushels annually to 67,000,000 bushels.

As heretofore, the program provides for paying producers the difference between the average price received and the guaranteed price for a specified amount of millable home-grown wheat, so long as sales do not exceed the maximum. When sales exceed that maximum, the guaranteed price is reduced proportionately. Deficiency payments are not made when the market price equals or exceeds the guaranteed price. Growers sell their wheat at whatever price the market will pay; but at the end of the season (July 31) they are given a so-called "deficiency payment" representing the difference between the average price actually obtained for millable wheat and the guaranteed price. The fund for making this payment is obtained by a levy, known as a "quota payment", on all flour delivered for consumption in the United Kingdom whether from domestic or imported wheat.

The rate of the levy on flour has been so small that the price of bread has not been affected. The fund, in fact, has accumulated to such an extent that the surplus available on April 18, 1937, was considered sufficient to provide for all deficiency payments to wheat growers during the cereal year ending July 31, 1937. For that reason, the existing rate of the quota payment to be made by millers and importers of flour (i. e., 4.37 cents per 100 pounds of flour delivered) was suspended on April 18 until further notice.

In regard to oats and barley, the new bill provides that, for limited quantities, growers not receiving the wheat subsidy shall be given an annual subsidy equal to the difference between the average price actually received and a guaranteed price of 8 shillings per hundredweight (i. e., 56 cents per bushel for oats and 85 cents per bushel for barley). Apparently, however, this equalization payment is to be made on not more than 6 hundredweights (21 bushels in the case of oats and 14 bushels in the case of barley) per acre, irrespective of actual yields. Moreover,

the subsidy is to be applicable only to oats and barley grown on limited acreages, the extent of which has not been announced as yet. Finally, the proposal provides that the total subsidy payable to producers of oats and barley may not exceed £1 ($4.92) per acre.

The bill also provides for governmental support for pasture improvement. In that connection it is proposed that the Government shall appropriate a sum of £1,000,000 (about $5,000,000) out of which it will pay 50 percent of the cost of the lime and 25 percent of the cost of the basic slag used in improving pastures. Further grants are also proposed for land drainage, as well as additional financial assistance for the eradication of livestock diseases.

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JAPAN-INDIA COTTON AGREEMENT EXTENDED

One of the interesting developments in the field of international commercial agreements in recent years has been the series of treaties entered into between Japan and other countries to assure outlets for the products of Japanese industry. Outstanding among these agreements is the one between Japan and India whereby Japan agrees to purchase specified amounts of raw cotton from India in return for a special quota on Japanese piece goods in the markets of India.

Such an agreement was originally entered into early in 1934. An increase in Indian duties on piece goods in 1933 dealt a serious blow to the Japanese textile trade and culminated in a Japanese boycott on imports of raw cotton from India. The conclusion of an agreement between the two countries early in 1934, however, terminated the boycott. The agreement expired on March 31, 1937, but was recently extended with some modifications to March 31, 1940.

The original agreement of 1934 set up a quota arrangement whereby India agreed to import a basic allotment of 325,000,000 yards of Japanese piece goods annually at a substantial reduction in duty in return for the Japanese purchase of 1,000,000 bales (400 pounds each) of Indian raw cotton.

The agreement also provided that, in the event Japanese purchases of Indian cotton fell below or exceeded 1,000,000 bales annually, the imports of piece goods from that country by India at reduced rates of duty would be reduced or increased by fixed amounts. For example, for every Japanese purchase of 10,000 bales of Indian cotton in excess of 1,000,000 bales, India agreed to take an additional 1,500,000 yards of Japanese piece goods up to a maximum of 400,000,000 yards. This maximum quantity of piece goods under the terms of the agreement would coincide with the exportation to Japan of 1,500,000 bales of cotton.

While the extended agreement substantially reproduces the terms of the original, India has somewhat reduced the amount of her basic quota on Japanese piece goods. Thus India now agrees to take a total of only 283,000,000 yards of Japanese piece goods annually against purchases by Japan of 1,000,000 bales of raw cotton. Such imports of piece goods, however, may be increased to a maximum of only 353,000,000 yards if Japanese purchases of raw cotton reach 1,500,000 bales.